THE NURSING AND MANAGEMENT OF SKIN DISEASES

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ACKNOWLEDGEMENTS

I gratefully acknowledge the debt I owe to many teachers and to many textbooks. If I have unwittingly included, without reference any statements of opinion that rightly belong to others, it is by coincidence and not by design. But in any nursing handbook that deals with conventional and established techniques, it is difficult to avoid including much that has been developed and taught by one's preceptors and colleagues.

Foremost among these I should like to thank Dr G B Dowling for his advice and encouragement and Dr H. J Wallace for his many suggestions and much helpful criticism. I should like also to mention the teaching of Dr J T Ingram who has emphasized the importance of many of the techniques that are included here.

My thanks are due to Dr M K. Polano for permission to include extracts and formulae from his book on Skin Therapeutics, and to the many pharmacists who have helped me in the preparation of the formulary to Mrs. Audrey Besterman for the beautifully executed line illustrations and to Mr R. G Mason, F.I.M.P., of the Photographic Department at Stoke Mandeville Hospital for his skill in taking the photographs.

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Finally I should like to thank my wife who has borne with great fortitude and for so long, papers everywhere and whose constant help has encouraged me throughout.

PREFACE

There are many excellent textbooks of dermatology available, and in compiling this small handbook I have not wished to add to their number but rather to provide a supplement that might be used with them. By their nature textbooks must be concerned chiefly with problems of diagnosis and choice of treatment and less with those details of management that confront doctors and nurses in their daily routine practice. Yet a correct knowledge of such details is of the greatest importance in treating patients with skin disease—probably more so than in any other branch of medicine. Neither the general practitioner nor the nurse may have been able to learn as much about these practical procedures as they would wish in the comparatively short time available in their training. They will both find themselves at a disadvantage when faced with the considerable amount of skin disease seen in practice. Few doctors have any contact with these problems in their House appointments and the omissions of a crowded syllabus can never properly be remedied in a crowded surgery. Nor are nurses able to gain such experience unless they are attached to hospitals with adequate dermatological in-patient facilities and dressing clinics.

The art of managing the patient with an irritable eruption demands a sustained interest and considerable patience. Yet a nurse who develops this has at her command nowadays sufficient resources to cure many of her patients and to alleviate all of them. In no other branch of medicine will she be able to follow so closely the course of the disease and in none will she see more clearly how her own personal care and skill contributed to its cure.

The skin is an external organ, very susceptible to outside influences and prone to injudicious self-treatment. It intervenes between the person and his environment and is frequently irritated by external agents. Once injured, it may be further damaged in the course of treatment—by wrongly applied remedies or by over vigorous cleansing by incorrect bandaging and friction from clothing or by the ignorance and credulity of the patient himself. It is particularly important to carry out even the simplest procedures correctly. Too often the details of these are left to the imagination of the patient, whose subsequent actions may be dictated by a

belief in infection and a fear of contagion. For disease of the skin carries in the layman's eyes a certain stigma, which has persisted despite the diffusion of medical knowledge in other fields. The healing of gravitational ulcers, the control of psoriasis and the successful eradication of warts, for instance, depend entirely on knowing exactly how to perform certain special techniques in a simple and effective manner. The belief that skin disease is caused by dirt and can be cured by strong antiseptics, that it is contagious and therefore a cause for ostracism and that it is not only disreputable but reprehensible, dies hard. The nurse will find herself having to reassure and calm and educate. The general practitioner must not only order the treatment but see the patient in his whole domestic and social setting. Furthermore, he must offer a prognosis. I have tried to bear these problems in mind in some of the chapters in this book.

The skin is a unique organ in being completely accessible for study. Both doctor and nurse have opportunities that occur in no other field of medicine for reading the signs and portents of disease and of relating these to the medical, social and industrial life of their patients. Its importance in the study of genetics and of social and psychological medicine needs no emphasis. If there is anything in this book which helps to stimulate an interest in these more general aspects as well as enabling the common disease of the skin to be handled with assurance, it will have justified itself. I hope also that the medical student may find in these pages a supplement to his more formal teaching.

In a handbook of this type, repetition is inevitable—and perhaps valuable. Where it is considered important, certain advice is repeated in different chapters, varying the emphasis or context in each case. The main references to such subjects will be found in the index. In the same way some dogmatism will, I hope, be excused. A balance has to be held between pressing a personal choice of remedy on the reader and confusing him with a surfeit of salves. If I have veered towards the former it is for the sake of clarity and simplicity. The formulary, however, is so constructed that a wide range of skin applications may be compounded logically and applied with understanding and it is hoped that this will go some way to remedying the lack of alternatives in the text. Even so, there will be many omissions of therapy, technique and procedure, that others have found useful. For these, and for the numerous other imperfections in this book I beg the indulgence of my colleagues and readers.

1958 D.S.W.

CONTENTS

Sections marked with an asterisk are those which are for reference on particular occasions rather than for general reading

Part One

THE BEHAVIOUR OF THE SKIN IN HEALTH AND DISEASE

Part Two

GENERAL PRINCIPLES OF MANAGEMENT

Part Three

THE MANAGEMENT OF CERTAIN COMMON DISEASES

Part Four

SPECIAL PROBLEMS OF RECOGNITION AND MANAGEMENT

CONTENTS

Part Five

SPECIAL TECHNIQUES

APPENDICES

ILLUSTRATIONS

PLATES

between pages 80 and 81

ILLUSTRATIONS

FIGURES

GLOSSARY OF TERMS NOT DEFINED IN THE TEXT

ABREACTION. A technique used in psychiatry by which the patient is made to relive an emotional experience of the past.

ACROCYANOSIS. A type of impaired circulation characterized by cold, purple hands and feet.

DERMOGRAPHISM. Whealing of the skin on stroking or rubbing.

DYSPLASIA. Term applied to abnormalities of structure (abnormal tissue formation)

GLABELLA. The root of the nose.

HALOGENS. Members of the group of elements that includes bromine and iodine. The term usually applied to bromides and iodides.

KERATINIZATION. The normal formation of keratin.

KERATOLYTIC. A substance that destroys or softens keratin.

LICHENIFICATION A particular type of thickening of the skin, the result of itching and subsequent rubbing.

MANIFESTATION. (Genetic). The appearance of an inherited abnormality in any individual or generation

NEURODERMATOSIS. Affection characterized by abnormal sensibility of the skin in the absence of visible primary lesion.

PARAKERATOSIS. An abnormal formation of keratin, present in certain skin diseases.

PATHOGENS. Organisms capable of inducing disease.

PETALOID Oval or round lesions extending outwards and scaling or clearing in the centre.

POLYMORPHISM. Applied to an eruption that shows different characteristics at the same time.

TELANGIECTASIA. Permanent dilatation of the small blood vessels of the skin.

HOW TO USE THIS HANDBOOK

The six parts into which this book is divided deal in order with increasingly specialized aspects of nursing and management.

PART ONE is devoted to some general principles of the behaviour of the skin.

In PART TWO the practical application of these is developed.

PART THREE is concerned with the management of a number of common diseases and

PART FOUR with certain particular problems that arise in the nursing of skin patients.

PART FIVE is entirely devoted to special techniques used in diagnosis and treatment.

PART SIX contains a short formulary and various other appendices —for reference only

As a handbook, it is not intended that any nurse should read it from beginning to end. The first three parts form a supplement to the formal training of student nurses the district nurse will be interested in the social and domestic factors in skin diseases rather than in hospital techniques the factory nurse in occupational disease the school nurse in children s diseases. But whether they are junior nurses or senior general practitioners they will inevitably meet, at some time or another most of the problems that are discussed here. At such times they will, I hope, be able to find some help from the appropriate chapters to which they refer In any case, this handbook should only be regarded as supplementary to standard textbooks of dermatology and of nursing, and to their own teaching and experience.

In the list of contents, those chapters which are essentially for reference on particular occasions rather than for general reading are marked with an asterisk.

PART ONE

THE BEHAVIOUR OF THE SKIN IN HEALTH AND DISEASE

CHAPTER 1

The Skin as an Organ

ANATOMY

The anatomy of the skin is fully described in other text-books and will not be considered in detail here. But the nurse who is dealing with skin disorders should be able to visualize the main components of this organ and understand its function. The following remarks may serve as a very general guide to these.

The skin is the largest organ of the body accounting for 16 per cent of the body weight. It is also one of the most important. It is composed of two layers epidermis and dermis (or cutis) (Fig. 1).

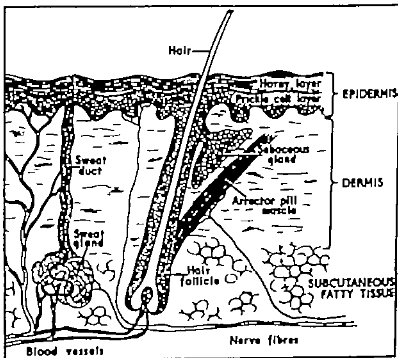


Fig. 1 Diagram showing the anatomy of the skin.

The Epidermis

This consists of a layer of cells varying in thickness in different parts of the body. They arise from a basal-cell layer [illegible] actively regenerating part of the epidermis. As [illegible] they are gradually forced outwards by the division of [illegible] behind them. On approaching the surface they alter and [illegible] ing the horny layer which is then imperceptibly shed. The [illegible] of *keratinization* is speeded up in the presence of [illegible] the scaling becomes visible (hyperkeratosis). When [illegible] not only hurried but disturbed, abnormal horn is formed [illegible] tosis). An increase in thickness of the epidermis itself is known as acanthosis. In the basal-cell layer there are also a [illegible] ment cells (melanocytes). Under appropriate condi[illegible] duce melanin which causes a darkening of the skin.

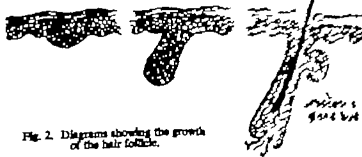


Fig. 2. Diagrams showing the growth of the hair follicle.

In certain areas of the body the epidermis is [illegible] to produce hair or nails. Though the hair is thickest and [illegible] on the face, armpits, belly and limbs, hair follicles [illegible] over most of the body surface. These follicles are formed by [illegible] of epidermis, turned in like a glove finger which pro[illegible] their central cavity instead of horn (Figs. 2 and 3).

Surrounding the hair follicle, in the upper part of the dermis, lie the sebaceous glands which secrete sebum, a [illegible] with important functions for the health of the skin [illegible] hair.

The epidermis is also pierced by the sweat [illegible] which are particularly numerous on the soles and the [illegible]. These also are invaginations of the epidermis but much [illegible] than the hair follicles. They pursue a tortuous path through the [illegible] to end in the coiled sweat glands lying deeply in the dermis.

Apart from these special invaginations, the whole of the epidermis is folded into corrugations which are known as rete-pegs. The cones of the dermis that lie between these rete pegs are known as papillae.

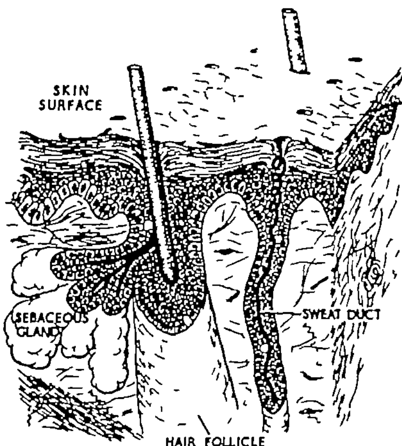


Fig. 3. Diagram showing the epidermal downgrowths.

The Dermis (or Cutis)

This consists of connective tissue called collagen. In this loose substance lie

(a) Blood-vessels. The arteries branch successively and reach the upper dermis as arterioles. Here they split into small capillaries which pass to individual papillae. A network of capillaries surround the hair follicles and sweat glands. These form

a capillary loop at their termination, meeting small venules which join to form larger veins. There are also a number of direct arterio-venous shunts which can open up and pass arterial blood directly into the venules.

(*b*) Lymphatic vessels. Their ramifications are similar to those of the blood-vessels.

(*c*) Nerve-endings They are numerous and of specialized types. They occur at different levels in the dermis a few in the epidermis itself

(*d*) The reticulo-endothelial system. This is represented by small nests of lymphocytes and other cells which may be stimulated into activity when this system is upset.

(*e*) A large number of wandering tissue cells (histiocytes) These move through the dermis and collect at sites of inflammation.

Part of the collagen is specialized in the form of elastic tissue composed of tough interlacing fibres that give the skin much of its strength and flexibility

At the lower level of the dermis the collagen becomes increasingly mixed with fat cells and these merge into the fatty layer which lies below

THE FUNCTIONS OF THE SKIN

The skin s earliest function was that of definition of outline. As it became more complex it developed a number of other functions, such as that of protection The formation of a specialized type of horn, hair and fur enabled this protection to be extended not only against enemies but against physical and climatic agents such as cold and rain

Excretion at least of fluids, was originally performed through the skin—at first by permeation, later through the excretory glands that eventually became the sweat glands. These still retain this capacity and some attempt at such excretion occurs in uraemia.

A constant body temperature is maintained by varying the amount of blood flowing through the superficial vessels, and by the excretion of sweat.

The skin has developed an ability to form antibodies, as demonstrated by the Mantoux and other reactions. It takes part in a number of highly important metabolic processes, including the synthesis of vitamin D Our knowledge of these metabolic functions is still in complete, but we know them to be complex and ultimately related to other organs, particularly the liver and the endocrine glands.

The function of protection against bacterial invasion depends upon a number of mechanisms that are discussed in a later chapter It need only be said that this protection is normally highly efficient.

Because of its special situation the skin acts as an interceptor between the organism and environment and to some extent as an interpreter of the environment. It is well endowed with sense organs, both inherent and projecting in the forms of hairs and whiskers. In blind people these sense organs become highly effective in enabling them to interpret their surroundings. Late in its evolution the skin has developed the function of registering emotions and may thus become disturbed in psychological illnesses.

Finally it is one of the main sites in the body for allergic reactions to develop, the skin becoming sensitized to external and internal allergens more frequently than any other organ.

It is this complexity of function which makes this organ so difficult to study and the diagnosis and treatment of its disturbances so exacting. We are often ignorant of the particular mechanism responsible for the changes that occur and methods of investigating this are not easily devised. Anatomically simple, easily accessible, the skin still offers a number of mysteries which remain to be solved. But we know that it is the site of a large number of defensive and metabolic processes that are essential to the welfare and, indeed, to the continued existence of the body of which it is so important a part.

TYPES OF SKIN

Except possibly in the case of identical twins, no two skins are exactly similar in type or behaviour Within broad limits it is possible to recognize certain characteristic types

The Soft, Fair Skin

This does not pigment easily and is intolerant to ultra violet light. It is liable to chapping and chafing from friction, alkalis and cold. It is more susceptible to eczematous reactions than the darker pigmenting skin.

The Greasy Skin

This is the seborrhoeic type of skin, with an abundant secretion from the sebaceous glands of the hair follicles. It is altogether a tougher skin than the former but prone to dandruff seborrhoeic dermatitis, acne and staphylococcal infections. This skin is commonly referred to as thick and as having large pores

The Pigmenting Skin

A dark skin and a greasy skin often occur together The colour is not necessarily related to that of the hair or eyes. It depends, not only on the amount of melanin present, but also on the thickness of the epidermis and on the degree to which the superficial blood vessels are dilated.

Uncommonly pathological abnormalities are found in which one or other components of the skin is present in excess or absent. In some families a very thick horny layer forms at sites of friction and pressure (tylosis). In others a general scaliness and dryness of the skin occurs (ichthyosis) Very rarely the sweat glands are absent or greatly reduced in number This forms part of a congenital developmental defect (ectodermal dysplasia), in which the hair teeth and nails are also deficient in quality

HEREDITY

We are endowed, at the moment of conception, with two sets of characters, one derived from each parent. These are carried on segments of nuclear material called chromosomes. When the male and female sex-cells join, each provide a number of chromosomes which fuse together to give the new individual its characteristics. Some of these are concerned with physical attributes such as height, body-build and colour of hair and eyes others with the endocrine and metabolic balance of our bodies others with general intelligence and those qualities of resilience and temperament with which we respond to disease.

When we talk of inherited abnormalities we refer to those departures from the normal that are due to predetermined characteristics carried in the chromosomes and not acquired during life. Some of these are present at birth, but others only appear later—such as male baldness.

An inherited condition, moreover need not necessarily appear at all in the course of an individual's life, *but may still be carried on to* his children. For an explanation of this and of the whole theory of genetics, the reader is referred to other text-books but three terms in general use must be mentioned here.

The actual portion of the chromosome determining a characteristic is called a gene. The inheritance of these genes can be dominant or recessive.

In dominant inheritance the character in question takes precedence

over its normal opposite number any individual carrying it will show it and will pass it to approximately half his children

In recessive inheritance the character is suppressed by its normal opposite number and does not show But if an individual carrying it marries another such person it will show in about one-quarter of their children. It is because members of the same family may carry these unrecognized recessive characters that cousin and other close marriages are discouraged. The chance of a recessive trait emerging is then greatly increased and most such recessive traits are undesirable or even lethal.

The importance of genetics in dermatology is obvious. We are able to observe deviation from the normal so easily on the skin that the inheritance of abnormalities becomes of practical value. In tylosis, for instance, the horny thickening of palms and soles behaves as a dominant abnormality and is carried by about half the children. Extensive family trees can often be built up by finding such a condition in different branches of the family over quite a limited district. Now that rural areas are no longer isolated, communities showing the same congenital anomaly occur less often than in the past. But there is still much to interest the district nurse and general practitioner in the genetic aspects of dermatological conditions, and patients should always be questioned carefully about this.

Congenital Abnormalities

These must be distinguished. They are not due to abnormal genes but are the result of errors in the development of the foetus. Most naevi (see below) fall into this group Congenital (or better developmental') errors are not transmitted to the next generation.

Different Manifestations of the Same Gene

It occasionally happens that a single gene gives rise to one or other of a number of different clinical manifestations. In families with atopic eczema, other members may show hay fever or asthma. Some members may show all three, either together or more commonly at different times (Fig. 4)

Identical Twins

Truly identical twins are not easily distinguished from similar twins. Identical twins share the same type of skin and often have the same diseases. But as their environment and upbringing may also be identical, it is difficult to decide how much is due to inheritance and how much to similar surroundings (see Plate I).

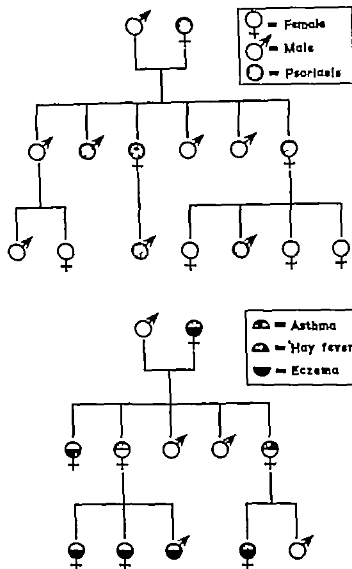


Fig. 4. Diagram showing inheritance in skin disease.

NOTE ON THE TERM NAEVUS

A nurse working in a skin department will frequently hear the terms naevus and naevoid applied to a wide variety of conditions and may find herself confused by the apparently wide use of the

words. There is, in fact, a certain laxity and variability in their use by dermatologists, and the explanation given below can only be taken as a rough guide to an interpretation of the term.

In the course of development of the embryo a number of failures or abnormalities of structural growth may occur due, not to the chromosomes, but to factors of which we have no knowledge. External influences during embryonic life are believed by the layman to be a common cause of naevi but are probably very unusual. The outstanding example is the effect of rubella during early pregnancy when extensive developmental abnormalities may occur in the foetus.

In a strict sense the term naevus is applied to lesions composed of naevus cells, a primitive type of cell that lies dormant in the skin—as in the case of fleshy moles—until later life. In a wider sense the term is used by dermatologists to embrace all types of developmental anomaly either generalized or localized. These range from haemangiomata, telangiectases and moles to systematized or generalized naevi of different types. It is not unusual to find a horny naevus running in a linear fashion down a limb or round the body or for the whole of one limb or even half the body to be affected by a port-wine stain. It is obvious that these generalized naevoid conditions come very close to congenital disorders and there may well be some inherited tendency to different types of developmental errors. Vascular naevi occur more commonly in some families than in others. We may eventually be able to trace a genetic cause for many conditions that we at present regard as naevoid.

One further point should be mentioned. Developmental errors are not always visible at birth. While some make their appearance in infancy or childhood, others only become obvious as the body grows to maturity; a few do not appear until old age.

The body is continually altering throughout life. Under the influence of varying stresses and demands, abnormalities of structure and function that have lain concealed hitherto, show themselves more plainly—particularly on the skin.

source, or the substitution of a new and virulent strain, may precipitate such attacks.

The mechanisms available to the skin to prevent or limit the invasion of these bacilli or to control their pathogenicity are numerous and complex.

The most important ones are

THE ACID MANTLE

The surface of the skin and the epidermis are acid in relation to the serum and tissue-cell fluid. An abrupt change occurs in the epidermis and acts as a barrier against invasion of bacteria that grow best in surface conditions.

FATTY SUBSTANCES

The sebaceous glands secrete sebum, a complex mixture of lipids and *fatty acids, some of which are bacteriostatic and bactericidal.* The adult sebum is also fungicidal the change in the quality of the sebum that takes place at puberty protects adult scalps from invasion by some types of ringworm.

THE SWEAT

The sweat exerts a powerful bactericidal effect. By maintaining the surface of the skin at a certain level of acidity it inhibits the growth of organisms. But when it is excessive it becomes less acid and encourages their growth. This happens in intertrigo where an infective dermatitis occurs in the flexures and skin-folds of obese patients.

THE HORNY LAYER

The horny layer itself acts as a protection against invasion. Normally it is impervious to fluids and to bacteria, but when it is damaged by keratolytics or alkalis this protection fails.

DESICCATION

There is evidence that the simple drying-out of bacteria limits their spread. The value of dusting powder in the treatment of intertrigo is partly due to this.

VASCULAR REACTIONS

If an organism, nevertheless, manages to invade the main body of the epidermis, an inflammatory response is aroused. Histamine is liberated and vascular dilatation oedema and leucocytosis occur The leucocytes engulf and destroy the invading organisms. This mechanism occurs in impetigo as soon as bacteria pierce the horny

layer In addition, a specialized allergic reaction may develop when the body reacts violently and abruptly against minimal attack by noxious agents.

It can be seen that many of these mechanisms are mutually antagonistic, i.e. sweat is bacteriostatic but moisture encourages growth. The integrity of the normal skin depends upon a balance between them. Thus protection against infection is remarkably efficient when one considers the insults and injuries to which the skin is continually subjected.

Protection against Trauma and Friction

This is brought about by an increase in thickness of the horny layer of the skin. Localized friction leads to corns and calluses. Those on the hands are often characteristic of certain trades for example, the milker's callus which is a horny thickening on the inner side of the thumb. In the treatment of corns it is not enough to remove the painful area by surgical measures or keratolytics. The friction which gave rise to it in the first place must be prevented or modified. This is particularly important in treating calluses of the feet.

ALLERGY

Allergy is a term that has been much misused—perhaps because it is not easy to define. The subject of allergy is a complex one and there are numerous reference books on the subject which may be consulted by those who wish to cover this particular field in detail. What follows is an attempt to explain, very briefly the alterations this process gives rise to and the effect these have on the skin.

The allergic state consists of an increased susceptibility of certain cells of the body—usually localized in one or more organs called shock-organs—to react explosively on contact with certain substances that would normally be either disregarded, or dealt with by a straightforward inflammatory reaction. Sulzberger has defined allergy as any acquired specific alteration in the capacity to react, which occurs in any organisms or tissues on exposure to certain living or inanimate agents or substances These substances are called allergens and may be quite harmless in people who do not show this altered capacity to react

Sometimes this tendency to react allergically is inherited In others it is acquired quite suddenly Usually only a single substance elicits the reaction. The allergens may be bacterial toxins, proteins, chemical substances, fungus extracts, or derivatives of complex molecules

CHAPTER 3

Eczema and Dermatitis

NOTE The definitions used in this chapter—particularly those in *the section on eczema*—*are not universally accepted. Many dif*ferent interpretations are given to this term, which is, as a result, entirely avoided by some dermatologists. Moreover the term dermatitis has developed a medico-legal significance of its own and should be used with caution. But it is important for the nurse to understand what is commonly meant by these terms and what are the processes involved, since they do give rise to a good deal of confusion.

Dermatitis

This term simply means inflammation of the skin Used alone, it has little value and generally refers to contact dermatitis (see below) It may be qualified in various ways

(1) according to the *type* of inflammatory response that is present, i.e. erythematous dermatitis, exfoliative dermatitis, pustular dermatitis, and so on—purely descriptive terms
(2) according to the cause or disease of which it is a manifestation, i.e. seborrhoeic dermatitis, atopic dermatitis, neurodermatitis, etc. Dermatitis medicamentosa (drug eruptions) should also be included here.

CONTACT DERMATITIS (DERMATITIS VENENATA)

This is inflammation of the skin due to contact with external agents. As might be expected, this comprises a very large group of conditions and a correspondingly large part of clinical dermatology Many of the common causes of contact dermatitis are so well-known as to be household words— primula dermatitis for instance. But many new causes of dermatitis are being recognized, particularly among plastics, dyes and solvents, and much obscure relapsing or unremitting skin trouble may be due to an unsuspected or undiscovered contact of this type There are two ways in which a substance in contact with the skin may cause dermatitis

(1) by acting as an irritant
(2) by producing an allergic or sensitization reaction.

Irritants

These are substances which always cause inflammation if applied strongly enough and for long enough. Strong acids, caustic soda, mustard, phenol, excessive ultra-violet light, heat and extreme cold, all damage the skin in some way or another A few people are susceptible to irritant reaction from substances in a weaker strength than normally causes damage This susceptibility depends on factors we do not yet understand.

Substances that give rise to this class of reaction are called *primary irritants*

Sensitizers

These provoke, in susceptible individuals, an allergic dermatitis, due to sensitization of the skin to the substance, or to some part of it. Originally it was thought that the sensitizing agent must be a protein (as is the case in most other forms of allergy), but it is recognized now that a non-protein substance may combine with the skin to form the sensitizing agent.

Allergic dermatitis is characterized by a sudden onset, an acute course, rapidly rising to a peak, extreme irritation, and cure on removal of the offending agent. As with other allergic conditions, only the weakest or most fleeting exposure is needed to produce a reaction. This is especially so in the case of perfumes and other volatile agents being in the same room as a primula is sufficient, if the patient is sensitive one part in a million of formaldehyde has been enough to cause an attack in a susceptible person.

Allergic dermatitis does not occur on first contact with the substance. The process of sensitization takes a minimum of four days to develop But it may occur at any time after that if the substance is still in contact with the skin, or if it comes in contact with it on a future occasion—however distant. Sensitization may develop only after years of innocuous contact—a point that is not easily understood by patients.

As has been mentioned, the reaction consists of oedema and erythema, though vesicles, bullae or eczema may also occur

The substances that give rise to sensitization reactions are legion—and increasing every day with the evolution of new commercial processes, cosmetics, dyes and plastics. Among those commonly responsible are primulas, certain hair-dyes, nylon clothing dyes, nickel, chrome (in cement workers) lipstick dyes, chrysanthemums, tomato plants, antibiotics, local anaesthetic creams and nail varnishes.

In fact, so many different agents may be responsible that it is difficult to find the cause. The patient does not understand how a normally harmless substance can be the cause of her trouble. In some cases, however the distribution of the eruption or the periodicity of attacks gives a clear answer This is particularly so in lipstick, nickel and nylon-stocking dermatitis.

Patch-tests are most useful. Since the sensitization remains for a very considerable time (usually indefinitely), a reaction can be obtained on the skin within a few hours of applying the suspected cause. The sensitivity is often so marked that this should be applied in a very dilute form (0 1 / potassium dichromate for instance) The skin of the whole body takes part in the sensitization process (though it may not show any eruption) Patch tests can therefore be carried out anywhere on the skin the back or upper arm is usually chosen.

Some substances can act either as primary irritants or as sensitizers chrome, for instance, or formalin. The dilution of the patch test is therefore of great importance if the results of the test are not to be misinterpreted.

INDUSTRIAL DERMATITIS

This is described in Section 24b of the Prescribed List of Diseases as inflammation or ulceration of the skin produced by dust, liquid or vapour It is, therefore, only a contact dermatitis due to substances encountered at work. *The word dermatitis written on a medical certificate has a special significance for a workman, who regards it as synonymous with Section 24b and, therefore caused by his work* Such a belief is very difficult to change and it may well act to his detriment, leading to unnecessary change of job and loss of earnings over a long period. Any worker is, of course, subject to other forms of skin trouble and even to contact dermatitis from hobbies, house-painting or gardening. A nurse should therefore not tell a patient who is a manual worker that he or she has dermatitis unless the diagnosis has been established. Indeed, the nurse should avoid using the term at all. At the best it is vague, and at the worst misleading through its medico-legal implications. It is better to speak of eczema as long as the diagnosis is in doubt.

ECZEMA

This complaint, which is better called eczematous dermatitis is a particular form of dermatitis which carries a worse prognosis than other forms. Its distinguishing feature—and hall mark—is

the presence of closely set pin-point vesicles on an erythematous base. These vesicles are due to small areas of oedema in the epidermis. If they develop quickly they burst, causing weeping eczematous dermatitis. If they develop slowly the formation of horn cells is disturbed and dry eczematous dermatitis results. There is considerable irritation. Although the recognition of eczema is often easy when these characteristic vesicles are evident, it can sometimes be very difficult.

This particular type of reaction of the skin is due to ill understood constitutional factors. An inherited predisposition appears to play some part and fair-skinned individuals are rather more prone than others. Having once occurred, eczema tends to persist or to recur. The acute stage gives way to thickened, scaly areas which are still very irritable. Rubbing, scratching, irritants, climatic changes and secondary infection cause further damage and a chronic stage supervenes. Emotional factors are of considerable importance in its perpetuation, and may be responsible for exacerbations. (See Neurodermatoses, page 47.) Eczema shows a marked tendency to spread from one area to affect other (often symmetrical) areas of the body. A patch of hypostatic eczema may thus be followed by a crop of lesions on both legs and arms; secondary areas of eczema frequently occur on the elbow flexures, eyelids and hands as a complication of nickel dermatitis at suspender sites; eczematous changes may follow on other types of allergic dermatitis.

Certain patterns of eczema are consistent enough to be distinguishable as clinical entities, e.g.

Nummular eczema, which affects the extensor surface of the legs, hands and forearms as scattered discoid and coin-sized plaques.

Infectious eczematoid dermatitis which is an eczematous complication of infection in the skin-folds, occurring behind the ears, in the groins and under the breasts.

In susceptible subjects attacks of eczema may be brought about by the slightest provocation—friction alone, for instance. But the essential cause is quite obscure.

NOTE Some dermatologists use the term eczema in a wider context than that described above.

CHAPTER 4

Skin Disinfectants
The Abuse of the Skin

Arising from a popular and largely erroneous belief that all skin diseases are caused by germs there is a tendency on the part of both the lay public and nurses to overestimate the need—or indeed the possibility—of sterilizing the skin. In normal circumstances this is well able to deal with its own resident bacteria and with transient pathogenic bacteria from outside. Infections arise when the defence mechanisms fail or when it is attacked in an overwhelming invasion. While it is certainly logical in such cases to counter any great increase in bacteria present on the skin, attempts to disinfect it entirely are bound to fail. Since many disinfectants and antiseptics are chemicals either toxic to the skin surface or liable to cause a sensitization reaction, they should not be used lavishly or without due care.

If the skin is helped to recover its own powers of dealing with invading organisms, a safer more logical and more permanent cure will be achieved. The sepsis that occurs in gravitational ulcers in an oedematous leg can be quickly and safely countered by reducing the oedema with elevation and rest and the provision of simple bland applications and light dressings. When antibiotic treatment is given in addition, praise is often wrongly attributed to the specific effect of the antibiotic.

Infected areas should whenever possible be kept dry and cool. Though soap is an excellent disinfectant it may irritate a skin that is eczematous, owing to its alkalinity.

General principles

Dry skin is more resistant to bacterial infection than damp skin.

Trauma and friction keratolytics and strong alkalis are likely to damage the protective horny layer and increase the risk of infection.

A combination of heat and moisture is particularly likely to weaken the skin's defences against bacteria. For this reason, wool,

lint and other heavy coverings to the skin should be avoided in all inflammatory conditions.

The bacterial population of the healthy skin remains fairly constant. There is no evidence that failure to bathe increases it. If the hands are scrubbed with soap and water the number of bacteria are temporarily reduced but slowly return to their previous level. If rubber gloves are worn they return more quickly due to the heat and moisture.

Frequent scrubbing, particularly with detergents or strong alkalis, makes the skin more prone to infection by removing the protective horny layer and sebum.

THE ABUSE OF THE SKIN

The skin is subject to much abuse in the course of its daily contact with the environment. The number of potential sensitizers is continually increasing. The psychological stresses of modern life lower the patient's threshold of reaction. Common forms of abuse of the skin are fostered by advertisements which take advantage of the public's preoccupation with dirt and the part it is supposed to play in skin eruptions (see next chapter). Soap, which can itself be used to excess, is being replaced by detergents, which have a powerful degreasing effect on the skin. The abuse of cleansing agents becomes worse in inflammatory states of the skin, when further damage is done to its already weakened protective powers in an effort to remove the germs. The addition of antiseptics enhances this effect.

Various articles of clothing can act as local irritants. Friction from a truss may give rise to patches of eczema in the groin, ill-fitting shoes to calluses. Thick socks induce sweating and encourage ringworm infection, cuffs of tweed overcoats chafe the wrists. Sensitization to nickel leads to a particularly severe type of eczema at sites of suspenders, dress clips and jewellery (Fig. 5). A rather different example is that of chronic chilblains on the legs in girls and young women. These are rarely seen in men and are due to the effect of cold on exposed areas in susceptible people. As Lewis said, it came in with short skirts and will go out with them.

The vicissitudes of hair fashions can lead to disease of the hair and scalp. Paraphenylene-diamine, used in certain dark hair dyes, can give rise to a severe sensitization eczema. Tight curlers may exert enough traction to cause loss of hair at the edges of the scalp (see

Plate 12). The current fashion* of shorter and straighter hair for women reduces this particular risk.

It is difficult to state categorically where cosmetics end and abuse begins. Sometimes they overlap. But the pursuit of beauty has always had its dangers. The binding of Chinese women's feet, the tight lacing of the Victorian era, the use of belladonna for enlarging the pupils, and of a dangerous hair dye, can all be cited in evidence.

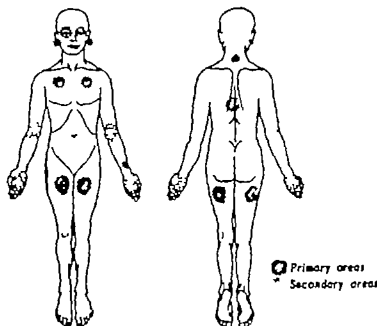


Fig. 5 Diagram showing front view and back view of a patient with nickel dermatitis.

* Apparently now being displaced by the 'pony-tail' which again exerts traction on the hairs.

CHAPTER 5

The Skin and the Endocrine System
Psychological Mechanisms
Social Factors

Pigmentation, alteration in the texture of the skin and changes in the hair patterns are important features of many endocrine disorders. A few common instances only are given.

DISORDERS OF THE PITUITARY

Fröhlich's Syndrome.

These patients are fat with a smooth, pale skin. The pubic and axillary hair is absent and the eyebrows may be scanty In some patients the nails appear to be thin and without lunules at their base

Simmonds' Disease.

Occurs only in women, usually after childbirth. The skin is pale or waxy and may later become wrinkled and glossy Axillary and eyebrow hair disappears completely

Cushing's Syndrome

Usually occurs in young adults, who become obese and develop florid, dusky skins. Striae of a purplish or red colour are seen on the back and hips. Excessive pigmentation may occur Female patients may have excessive body hair

Acromegaly

This gives rise to a coarse, thick, furrowed and wrinkled skin with acne and comedones. Hair growth is often accentuated.

DISORDERS OF THE ADRENAL GLAND

Addison s Disease.

The characteristic hyperpigmentation is usually but not always present. It involves normally pigmented areas, such as the face, neck, arms and nipples, the mucous membrane of the mouth and the palmar

creases and operation scars. Areas subject to clothing friction are also darkened.

Adrenal Tumours and Hyperplasia.

These give rise to a syndrome of which hirsutism is a prominent feature. Increased body and facial hair in young women is not usually associated with any discernible endocrine abnormality but represents an inherited divergence from the normal hair pattern. It is compatible with a perfectly normal life. But any rapid increase in body or facial hair calls for a searching examination to exclude an adrenal or ovarian tumour. Other signs of virilism are loss of scalp hair, acne and—in women—deepening of the voice and a shrinking of the breasts.

DISORDERS OF THE THYROID GLAND

Hyperthyroidism (Thyrotoxicosis).

This skin is smooth and moist from excessive sweating. There is an increased peripheral blood flow and high skin temperature. Pigmentation, vitiligo (piebald skin) and loss of scalp hair sometimes occur.

Hypothyroidism (Myxoedema).

The skin is thickened, coarse and dry. The limbs feel cold to the touch and acrocyanosis or chilblains develop easily. The horny layer may show a yellowish colour due to carotinaemia. Loss of hair is common and what hair remains is dry, brittle and scanty. Nail changes may also be present.

PSYCHOLOGICAL MECHANISMS AND THEIR BACKGROUND

From the earliest times, disease of the skin has borne a sinister or evil context. In primitive societies disease was attributed to possession by evil spirits. Later, with the growth of a sense of guilt, it became associated with sin. Being visible, the skin bore the marks of this association most clearly. In early nomadic communities it was also of great importance to detect and isolate infectious disease and to take the necessary steps to protect the rest of the tribe. The 'white spot' of leprosy had to be distinguished from other types of depigmentation, and the procedure followed in diagnosing this condition and isolating the sufferer is described in detail in Deuteronomy. Many of the cases were probably not leprosy at all but perhaps psoriasis or some other relatively benign condition. Added

confusion has occurred because the original name of psoriasis was lepra meaning, a scaly patch Thus the sinister significance of skin disease was appreciated at a very early stage in man's evolution, and the ostracism of patients suffering from skin disease has persisted as a strong trait of most communities since then It still plays a considerable part in the patient's attitude to his disease and the view taken of it by his relatives and friends.

When leprosy died out in Europe in the fifteenth and sixteenth centuries, syphilis took its place as the most important contagious skin disease. The frequent mention of the Great Pox or French Pox in Restoration comedies is evidence of this. Even today unconscious doubts and anxieties are often present in patients who fear that their disease may be of this nature (or at least may be regarded as such) Young and middle-aged men may have to be specifically reassured on this point. The fear will frequently not be expressed openly This racial and inherited memory of the sinister implication of skin disease is very hard to dispel, and it is a common belief among all classes and groups of people that such disease is associated with dirt in one form or another The emotional emphasis that often accompanies this belief leads one to suspect that the dirt is unconsciously recognized as moral rather than physical.

The conversion of emotional tensions into functional upsets of bodily organs arises out of a very primitive mechanism normally present in a varying degree throughout the animal kingdom. The following example is often given in explanation.

When an animal meets an enemy in the jungle it has two alternatives—to fight or to flee. In this situation, certain changes take place which are mediated chiefly through the autonomic nervous system. These bring about erection of hair dilatation of the pupils, an increased blood supply to the muscles, vasoconstriction of the skin, and so on—all adaptations to enable the animal to fight or flee to the best advantage.

Situations of danger evoke similar reactions in man, but the situations themselves have changed. The dangers are now moral or psychological, rather than physical, but always, in a broad sense, represent a threat to his self-preservation. Whatever they are, the body reacts in the same pattern. Since the simple solution of fighting or running away is usually not possible—because of considerations of pride, social setting, patterns of life and personal relationships—a state of conflict ensues. As a result of this, sustained tension develops in the body which continues to exhibit an intensification

or prolongation of the changes brought about by the autonomic system. These changes may persist for a long time in fact as long as the conflict lasts. In most people the tension is eventually dissipated in one way or another either by a shift in the emphasis of personal relationships, the relaxation of hobbies and games, or by some gradual readjustment of the causative situation. Such conflicts are of course, common, especially in highly-civilized communities, and are dealt with more or less successfully The advantage gained by holidays or treatment away from home surroundings lies in removing the patient from the scene of conflict. On return, he may find that this has ceased to exist, or that a solution has become clear

Human beings, like animals, vary in their fitness for the fight for survival but whereas in animal societies the weak succumb, in human societies they are supported by the community Common dangers are faced communally but the individual problems and conflicts still remain. Here the community—in the form of the State —cannot easily help (though the Church can) Wise advice is not always easy to find and never easy to accept. The patient must, in the final outcome, find his own solutions. It is some help if the nature of the conflict can be clearly seen and appreciated We are all more afraid of what we do not understand, and the terrors of the unknown are reduced when its nature is explained. It is here that a psychiatrist comes into his own. He is able to assess the temperament and character of the patient and the source and strength of the conflict and bring him to see the nature of his difficulties. A priest working closely within a community is often able to do the same.

The description given above is very greatly simplified and only sketches the outline of a process that has many ramifications. As an illustration, it can be employed usefully in showing patients the difference between organic and nervous conditions This appreciation is usually lacking. A disease due to nerves is socially acceptable, but feelings of aggression and guilt in his personal relationships are not, and will frequently be denied or turned into other channels.

Patterns of Abnormal Function

Whether a patient is better or less able to deal successfully with a situation depends upon a number of factors his inherited qualities, his training and upbringing, his intelligence and his degree of mental stability When they occur such abnormalities of function may show themselves in a variety of ways. They may exist in an unorganized form as a generalized psychoneurosis, or they may be displaced and

become centred on any one of the body systems. The choice probably depends upon a variable susceptibility of different tissues and organs in individuals, the pattern of which may be inherited—just as the ability to stand up to stresses is itself largely inherited. If the skin happens to be constitutionally prone to respond to such general upsets of function, or if it has already been weakened by disease of one sort or another it may express this tension in the form of a neurodermatosis * In a given case either the constitutional or recent precipitating factors may be the more important. As long as such a state of neurodermatosis exists, it may alleviate the patient's conflict by directing tension on to the skin, which, by its irritation, sets up a recurring pattern of itching, scratching, thickening and itching again. This cycle may continue on its own accord after the initial impulse has died down. Part of the treatment of the neurodermatosis lies in trying to break this cycle but unless the cause of the tension is removed, this is not easy to do. In many cases it is impossible to alter the environment or the personal relationship of the patient so that conflicts cease immediately Most patients come to terms with their difficulties sooner or later and cease to need this outlet. But for some, such a conversion onto a particular organ may act as a balancing factor, and its removal by enforced therapy may leave an undistributed tension which will find its outlet at another site or in another organ.

The presence of a skin disease is itself a cause of anxiety and will naturally give rise to distress and often to fear—of contagiousness to the family—of cancer—of venereal disease. In persons of a sensitive or anxious nature this may set up a series of changes leading to depression, restlessness and insomnia, or even to symptoms of anxiety referable to other bodily organs, such as headaches, palpitations, diarrhoea, or anorexia. These secondary symptoms must be recognized as such. They will disappear on firm and effective reassurance.

SOCIAL AND DOMESTIC FACTORS

These are often of great importance in the assessment of causes of neurodermatosis and in the rehabilitation of a patient with chronic forms of skin disease. The conflicts giving rise to the former may

The word neurodermatosis is used here as a general term for a group of certain highly-irritable skin conditions associated with considerable emotional disturbance, such as lichen simplex, prurigo, erythematous dermatitis of the face, and generalized or localized pruritus without organic cause. Neurodermatitis is confined by most English and Continental authors to the condition of lichen simplex. In America it is used as a synonym for atopic dermatitis of adults.

centre around domestic difficulties. These are usually concerned with personal relationships rather than the housing conditions themselves. But the absence of satisfactory living conditions may act as a precipitating factor when the capacity for psychological adjustment is poor The difficulty of looking after children in a caravan, for instance, may provoke an exacerbation of an atopic dermatitis in a predisposed person

In other cases, the close proximity of a mother in law undesirable lodgers, or simply too many people in one house, imposes a strain that is unbearable the patient responds with a neurodermatosis. How far these particular patients would remain immune, were they in better housing conditions, is a matter of debate. It is probable that their psychological make-up does not allow for any margin of reserve against stresses and particularly from the close contact of different personalities in everyday life. In some cases, the physical conditions of home life induce infestations and infections, but here again the fault usually lies in the personality of the woman in charge of the house, rather than in the condition of the house itself

Difficulties in the domestic environment may also exert an indirect influence on the control of patients with a variety of forms of break down of the skin Disagreements with neighbours, long uphill walks to and from shops, isolation from social amenities, and a sense of detachment from community life is found more often in new estates and suburbs than in slums and small villages. Housekeepers are particularly prone to a combination of inflammation of an ageing skin from external irritants and neurodermatitis from strains in personal relationships. Papular urticaria in children may be due to bites from insects on household pets. Bed bugs, another cause, are not uncommon in old houses with wooden walls or beds.

In contact dermatitis, where the responsible agent is not apparent, a knowledge of the patient's home may provide the answer Ivy round the window recent painting and decorating, primulas in the room, plastic table-tops, the contents of the medicine cupboard and kitchen mantelpiece—the adept and experienced eye will take all this in It is very important to try to see such patients in their home surroundings. A surprising amount of detail is left out by patients when describing the daily routine of their lives.

CHAPTER 6

Prognosis Causes of Chronicity

There is a widespread belief that most skin disease is incurable. While it is true that many conditions can only be modified or kept under control, there is no reason to regard the skin as unique in this respect. However the skin is an organ that is exposed to view and subject to so many external influences that it does suffer certain disadvantages. Among these may be mentioned

The influence of popular belief (the origin and extent of which have been described above) *on the cause of skin disease and its appropriate cure* Preoccupation with dirt as a cause, and the vigorous scrubbing and antiseptic applications that are thought best to counter this, act as an initial barrier to logical treatment. The patient's embarrassment and disgust at the presence of obvious and visible disease are also adverse factors.

The number of genetically determined or developmental conditions seen on the skin Many of these are incurable and cannot be altered by treatment. We know that they also occur in other organs, but they are then invisible and often functionless when they are on the skin, they add to the visible number of apparently incurable diseases.

The influence of psychological disorder The skin, like the stomach and gut, bears the hall-mark of the patient s personality Stresses set up by incompatibility with his environment may find expression on the skin. These stresses are usually outside the control of the doctor or nurse and form a powerful influence in determining chronicity and in affecting the prognosis of certain groups of skin disease.

SPECIAL PROGNOSTIC FACTORS

Type of Skin

Natural variations of colour texture and general make up of the skin are important factors in assessing prognosis. A fair soft skin with little pigmentation is especially prone to the eczematous reaction The seborrhoeic skin is more liable to secondary staphylococcal infection the scalp in these people is often scurfy and may

centre around domestic difficulties These are usually concerned with personal relationships rather than the housing conditions themselves. But the absence of satisfactory living conditions may act as a precipitating factor when the capacity for psychological adjustment is poor The difficulty of looking after children in a caravan, for instance, may provoke an exacerbation of an atopic dermatitis in a predisposed person

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Environmental factors

Apart from poor hygiene, poor intelligence, overcrowding and bad family conditions (all of which obviously affect the prognosis), other personal factors have already been shown to be of great importance. Some of these are dependent upon personal psychological difficulties. Many people who exist quite happily in a limited and secure environment will lose their courage when faced with hostile or unrecognized surroundings. They then seek in any disease present at the time a means of hiding away or retiring from an unkind world. Conflicts within the social and family circle may act in this way presenting a patient with an unfamiliar situation which it is beyond his power to meet except by a retreat into illness. For these reasons, patients with difficult and extensive skin eruptions are often admitted to hospital as the first and most important measure of treatment. It may be the only one needed. Where family tensions exist, visits by relatives may influence the prognosis for the worse. Job with his comforters, stretches to forty-two chapters.

Failure in Management

The failure to carry out the details of treatment properly particularly when at home is one of the largest single factors determining the prognosis. Good management does not necessarily go hand-in-hand with a high degree of intelligence. Psychological and emotional factors connected with skin disease can act as an unavoidable and insurmountable bar to carrying out these details correctly A trained nurse, able to impart the necessary knowledge and to give guidance by example and at the outset of treatment, can do more than anyone else in seeing that this is carried out properly

Endocrine Factors

The menopause in women often intensifies or protracts skin eruptions occurring at this time. Acne will often last until *adolescence* is past or until an endocrine disturbance is corrected. Recurrent explosive conditions of a vascular nature such as migraine, urticaria, aphthous ulcers and chilblains frequently vary with the menstrual cycle.

Psychological Factors

Either the psychological background of the patient or the secondary psychological factors produced by the presence of the disease itself may protract an eruption and affect the prognosis. Consciously or unconsciously scratching and rubbing may defeat all efforts to

cure an eczema or a neurodermatosis. Both malingering and hysterical artefacts may become so much a part of the make-up of the patient that he cannot lose them a patch of neurodermatitis may fill some void in a patient s emotional life. As long as this lasts, attempts to relieve it will be unconsciously resented. Indeed, a forcible cure may be followed by psychosomatic disease elsewhere in the body

PART TWO

GENERAL PRINCIPLES OF MANAGEMENT

Calamine lotion for erythemas, sunburn, pruritus.
Zinc cream for acute eczema and dermatitis.
Zinc cream with ½ per cent gentian violet or brilliant green. (There is little difference in their effect, though gentian violet is probably more active against bacilli and brilliant green against yeasts.) A safe and soothing application for infective eczematous conditions.
Oily calamine lotion an alternative soothing lotion.
1 per cent gentian violet in 70 per cent spirit for impetigo cuts, wounds, small areas of infective eczema.

You will do no harm with these, even if your diagnosis is in doubt. It is quite possible that no one will be able to do any better

BANDAGING, SPLINTING AND PROTECTION

The purposes of bandaging are

1 Protection of wounds, sores and ulcers from outside contamination.
2 Protection from movement in fractures.
3 Protection from the effects of rubbing and scratching so that the inflamed skin may heal.
4 To keep in place applications, dressings and inunctions.
5 To prevent bleeding (pressure bandaging)
6 To control oedema (pressure bandaging)
7 To prevent infection of others (very rare).

For the practical purposes of skin nursing we may disregard 2, 5 and 7 except to mention

5 the use of tubular gauze bandaging as a pressure dressing after curettage of warts on fingers or feet.

Dressings

Gauze and especially lint are generally unsuitable for skin dressings. Simple linen or rag is the best material to use and can easily be torn into strips of the required size.

Types of bandaging

The old type of roller bandage is obsolete. In skin disease, it is wasteful, expensive, and time-consuming to apply It rucks up on limbs and tightens round joints at night. Once cut for redressing or on the doctor's round, it cannot be used again.

Tubular gauze bandaging is easier to apply more economical and more comfortable in all respects. It may be used on all conditions

needing simple and straightforward covering. Its advantages, specialized uses and techniques of applications are explained on page 217. In general, coverings should be loose and thin unless applied for protection or for pressure.

When an eruption is extensive and a soft or a liquid application is being used often during the day bandaging is not needed. A blouse, old shirt, or a pair of poplin or cotton pyjamas can be worn as protection, either in bed or under clothing. Conventional clothes should be cool and loose and should not constrict any part of the body.

When the groins and genitalia are affected, pyjama trousers are best left off and a night-shirt or loose shirt worn instead.

Where the body-folds are affected, strips of linen or rag are folded double and used to separate the adjoining surfaces (Plate XX). Lint must not be used.

SPECIAL CONSIDERATIONS

For Open Wounds, Ulcers or Ruptured blisters

Tulle gras (plain) is the least painful dressing for pemphigus and other generalized blistering eruptions. Antiseptic and antibiotic ointments may be applied beneath the tulle gras. The dressing for ulcers of the legs depends on the particular technique used. A piece of clean rag or linen is usually adequate unless special attention is being paid to the bacterial flora, when sterile gauze may be required.

For Protection

A closely fitted tubular gauze bandage, securely fixed at the ends with adhesive tape, gives adequate protection to such areas as limbs and may be left on for two or three days.

Paste-incorporated bandages are, however the most common method of securing protection and preventing scratching and rubbing. (They also stop interference by the patient in dermatitis artefacta—though not the insertion of knitting needles down the edges of the bandage.) These bandages derive from Unna's gelatin boot—a technique, now little used, of painting layers of a gelatin paste onto limbs to form a protective and supportive covering. The types of bandage commonly used are

Zinc oxide paste (e.g. 'Viscopaste').
Zinc and ichthyol (e.g. 'Ichthopaste')
Coal tar paste (e.g. 'Coltapaste').

Other types are available.

These bandages need to be warmed before use in cold weather They are applied direct to the skin and smoothed with the hand. They may be covered with tubular gauze for convenience and elegance. Their chief uses are for subacute or chronic patches of eczema of the limbs lichenified eczema where much scratching is taking place hypostatic eczema and ulcers (for the added support they give) hypertrophic conditions (such as lichen planus hypertrophicus) prurigo artefacts. The coal-tar paste bandages are especially useful in atopic dermatitis.

Adhesive Types of Bandaging

A variety of proprietary makes are in use, all designed to give flexible but secure support, with the least risk of skin sensitization. Unfortunately it is not possible to eliminate this entirely and some few patients will always react to their use. The risk is reduced by

Painting the limb first with gentian violet 1 per cent, aqueous or in spirit.

Applying the bandage inside out.

Applying over tubular bandage (if the skin condition allows)

A strip of unopened No 01 Tubegauz inserted beneath any of these bandages and left protruding at the ends creates a tunnel down which they can be cut swiftly and safely (see Plate XXI (*a*), (*b*), (*c*) and (*d*).

Elastic Webbing Bandages

These are purely supportive. Crepe bandages quickly lose their strength and flexibility and become twisted and rucked. Three-inch elastic or nylon elastic webbing bandages ('blue-line or 'red-line') are preferable. These are used in most clinics dealing with the treatment of gravitational ulcers (see Plate XXII)

SPLINTING

Splinting is by no means the cruel restriction it is believed to be. Babies soon grow used to it and tolerate it well. Cardboard tubular arm and leg splints prevent flexion but allow movement. They should be padded at the ends and may be attached by tapes tied at the child's back. Leather tubular splints are obtainable and are more reliable. Plastic or Plexiglas is now being used for the same purpose. In many cases tubular bandaging, occlusive paste bandages and sedatives will take the place of splinting in others, gentle restriction by cuff-tethering to the sides of the cot is adequate.

SOAP AND WATER AND SKIN CLEANSING

Reference is frequently made in this book to the avoidance of soap and water The reasons for this are explained in the chapter on the defence mechanism of the skin. The prohibition applies particularly to patients with eczematous conditions of the hands or chronic paronychia. The words soap and water embrace all alkalis and detergents. The latter are alkaline to varying degrees and, in addition, very effective degreasing agents. Water itself does no harm, but it is always coupled with soap in the mind of the average housewife (even the average husband). The extensive use of soap and cleansing agents, a use fostered by very skilful advertising, is of comparative recent onset, dating from a time when dirt itself was responsible for far more disease than now

Patients often use soap antiseptics, and blood mixtures as the first treatment of any skin condition to which they fall prey believing this to be caught through dirt and therefore deserving of thorough cleansing. Unconsciously the dirt may have a symbolic significance that also demands an inner purging.

The injunction to avoid soap and water is not received with acclamation by the patient and is obviously extremely difficult for the housewife to carry out. For suggested methods of doing this, see Chapter 24

Other disadvantages of cleansing with water are due to certain associations (particularly if the water is hot)

(a) Abrupt temperature changes leading to erythema and irritation If baths are taken by patients with skin disease, the bathroom should be warm and the water itself only a little warmer than the environment of the room.

(b) The effect of drying, especially with rough towels. A tender and recently eczematous skin can easily be irritated by brisk rubbing. It is important to dry the folds thoroughly if these have been inflamed It is best to dab dry with a soft towel or absorbent tissue.

When a patient with an eczematous skin is allowed to return to the use of soap and water a superfatted soap should be used, and well rinsed off Progress towards normal washing should be gradual.

Alternative Cleansing Methods

1 Soft rainwater No rough drying.

2. Boiled milk (traditionally asses but cows will do!) can be used for face-cleaning instead of cosmetic cleansing creams when the skin is inflamed.
3. Starch or bran baths (see page 220)
4. Arachis oil (olive oil is expensive and unnecessary) The most commonly prescribed agent.
5. Liquid paraffin. Particularly in peri-anal areas.
6. Emulsifying agents, such as Ung. Emulsificans Aquosum B.P or lanette wax 5 per cent in water This softens pastes and ointments, which may then be removed by gentle, persistent rinsing in warm water These agents will probably supplant oil as cleansing materials. They are harmless, easy to apply or to whisk up with warm water and effective. The skin should be dabbed gently in subsequent drying and must not be left damp. Emulsifying ointment 1 oz., mixed with the water makes an acceptable bath for infants and young children with atopic dermatitis.

NOTE Patients (and nurses) must be warned never to rub skins that are inflamed in the course of cleaning them. It is far better for some of the application to remain on the skin than for the skin itself to be damaged or irritated anew

CHAPTER 8

Internal Remedies and their Limitations

Many internal remedies have been given in the past for a wide variety of diseases of the skin. Few of them had any specific value As new antidotes have come into use, most have fallen into disrepute, but some are still given empirically

SPECIFIC DRUGS AND ANTIDOTES

Sulphonamides and Antibiotics

These are used for severe infections caused by the staphylococcus and streptococcus. Antibiotics are certainly prescribed too freely for skin conditions that would respond equally well to their local use. They should only be given for short periods and in conditions in which their effectiveness is beyond dispute, such as cellulitis, severe impetigo with constitutional symptoms, carbuncles and grossly infected eczema. Sulphonamides are often as effective, and far cheaper A considerable proportion of skin staphylococci are penicillin-resistant, and an increasing number are becoming resistant to both chloromycetin and aureomycin. This is one good reason for discouraging the indiscriminate local use of these valuable drugs.

Antihistamines

These are grossly abused in practice. They neutralize circulating histamine and are rightly given in an acute attack of urticaria and angioneurotic oedema. They have no specific value in eczema, where the allergic reaction is fixed in the skin. The extensive use of these drugs is due to their hypnotic side-effects, which are as unreliable as they are unpredictable. There are a large number on the market (see Appendix, page 267). Of these, Phenergan is one of the longer acting, Histantin an intermediate, and Benadryl and Anthisan short-acting varieties. Side-effects are more marked with the latter than with the former In acute conditions they can be given intravenously or they can be injected with insulin or penicillin to avoid reaction to these drugs. Piriton (10 mg.) is suitable for this purpose.

B.A.L.

This was discovered in the late war and has a specific effect on exfoliative dermatitis and other eruptions caused by heavy metals. It should be given early in the disease, as laid down in the directions. Abscesses frequently form at the site of injection and scrupulous asepsis is necessary

Dapsone (diaminodiphenylsulphone)

This exerts a specific effect in leprosy

A.C.T.H. and Cortisone

These are considered in a separate chapter

Isonicotinic acid hydrazide, Streptomycin, P.A.S. and Calciferol

These anti-tuberculous *drugs* have a *specific* effect on *lupus vulgaris*, scrofuloderma and other frankly tuberculous conditions of the skin. They are also occasionally used for sarcoidosis, though less successfully The first two drugs mentioned act on the bacillus itself, while calciferol stimulates the healing reaction of the tissues. Sometimes these drugs are given together and sometimes a combination of I.N.H. and streptomycin or P.A.S is followed by calciferol. Treatment is continued for some months in the case of lupus vulgaris. Calciferol may give rise to toxic effects such as nausea, abdominal pain, headache and polyuria. It is usual to check the serum calcium level each month and to carry out a kidney-function test at intervals if the patient is on treatment for any length of time.

Nitrogen Mustards and Allied Drugs

Given for mycosis fungoides and other reticuloses of the skin. Nitrogen mustard is administered intravenously usually in a saline drip. It frequently causes considerable malaise with nausea and vomiting. These effects are partially controlled by chlorpromazine. Newer drugs, allied to nitrogen mustard, are given orally

Anti-syphilitic Measures

The following drugs are of use penicillin, bismuth, mercury and iodides. Arsenic is seldom used nowadays.

The first two are given for primary and secondary syphilis. In tertiary syphilis of the skin it is usual to start treatment with mercury or iodides or a mixture of the two by mouth and to follow this with a course of penicillin. If penicillin is given at the outset and the vascular system is involved, a severe reaction may occur (Herxheimer reaction).

Tonics

Opinions about tonics vary and many would regard them entirely as placebos. In elderly people with atrophic gastritis, anorexia and hypochlorhidric anaemia, a mixture of strychnine or nux vomica taken with meals is perhaps helpful. In the same way bitters taken alone or in a bland preparation may encourage appetite. A mixture such as mist. gent. alk. is used (B.N.F.) as a vehicle for phenobarbitone.

Mepacrine and Quinacrine (Chloroquin)

The effect of mepacrine on lupus erythematosus was found accidentally a few years ago and it was subsequently given extensively for this condition. But it is not well tolerated by many patients and causes a yellow pigmentation of the skin. It has been superseded by chloroquin in doses of 200–600 mg. a day. This is less toxic and the results are eminently satisfactory. Side-effects are very uncommon, though a few cases of bleaching of the hair have been reported from its use.

Sulphapyridine

This has an empirical effect in reducing the severity of cystic and pustular acne. This action is not shared to the same extent by other members of the sulphonamide group. It is also given in dermatitis herpetiformis, where it often has a dramatic effect. In neither case is its action concerned with control of infection.

Dapsone

Apart from its specific effect on leprosy it has superseded sulphapyridine as the drug of choice in the treatment of dermatitis herpetiformis, where its action is constant enough to be of diagnostic value.

THE PLACEBO WITH PARTICULAR REGARD TO THE SKIN

Placebo is the name given to a medicine with no known action prescribed to please the patient. This aim should not be despised. The arrogant belief that modern science can provide a remedy for all ills is an illusion of our times and one increasingly held by patients. A generation seeking an outward and visible sign is particularly vulnerable to placebos, and they may indeed exert a considerable psychological effect and seal the contract of faith between doctor and patient. They are abused when they take the place of more time-consuming attempts to ease a spiritual wound or

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Hormone Treatment

Oestrogens are of some value in resistant acne in girls and young women. In young men with the same condition the procedure is less rational and more dangerous. In this case, short courses only should be given. They are also useful in certain post-menopausal conditions of the skin in women which may be expected to benefit from substitution therapy such as senile vaginitis, and in some cases of senile eczema. Oestrogens are given in large doses for inoperable carcinomata.

NOTE Within the child bearing age they are best given in broken courses after the periods. The patient should also be warned of the possibility of withdrawal bleeding for which she may otherwise be referred to a gynaecologist and even suffer a hysterectomy

Methyl testosterone alleviates the itching that is sometimes associated with liver disease.

Chlorpromazine

Although this is mentioned on page 71 there are two specific actions of chlorpromazine that deserve mention here The first is in the control of vomiting. It is of value as an adjunct to any treatment which produces nausea or vomiting, such as that accompanying high doses of radiotherapy or the nitrogen mustards.

Its second action is in relieving pain. It is useful in the neuralgia of herpes zoster and in painful terminal illnesses.

Vitamin Therapy

This is properly used as a specific in dermatology in

- *Scurvy* Chiefly seen in elderly persons with dietary fads or dyspepsia.
- *Pellagra.* Seen rarely and usually in an incomplete form.
- *Liver disease and chronic alcoholism.*
- *Prolonged debilitating skin disease* such as pemphigus and exfoliative dermatitis, where there is a loss of protein through the skin and secondary liver damage

A number of other specific remedies for rare and unusual conditions will not be mentioned but may be found in the appropriate text-books.

EMPIRICS

These are substances found to be of value in treatment though exerting no known specific effect.

Vitamins

Enormous quantities of vitamins are prescribed, both as empirics and placebos.

Vitamin B complex is often given in the treatment of many chronic skin conditions, particularly those in the seborrhoeic group. Injection of crude liver extracts, such as Plexan, have given way to vitamin B_{12}, the currently fashionable portion of the complex. There are also a great number of oral vitamin B preparations. Intravenous vitamin B cocktails are given in certain generalized skin conditions associated with liver failure, malnutrition and anaemia.

Ascorbic acid has been given intravenously in doses of 1 000–1,500 mg. daily for five or more days. This has a mild adrenal-stimulating action but is of doubtful practical value

T.A.B.

Intravenous injections of typhoid and paratyphoid organisms in doses from 20 million to 400 or 800 million organisms are given to produce an artificial fever in a number of resistant skin conditions. It is a treatment of considerable value. The dose should be regulated so that this fever reaches 103 F for a few hours and then drops slowly to normal. The injections are repeated every third or fourth day They are naturally contra-indicated in the elderly and those with heart disease T.A.B is sometimes of more lasting benefit than a course of cortico-steroid therapy Though almost entirely devoid of risk, isolated cases of death from anaphylaxis have occurred.

Auto-haemotherapy

Ten millilitres of the patient s blood is withdrawn from his vein and injected immediately into his buttock. No doubt there is a strong psychological effect from the treatment.

Arsenic

Used extensively in the past, this has rightly fallen into disuse, because it is a cumulative poison. Many years later it may produce malignant changes in the skin and bronchial mucosa.

Mercury and Iodides

A mixture of perchloride of mercury and potassium iodide is still given for a reduction of excess fibrous tissue, a reputation based on its effectiveness in tertiary syphilis of the skin. An expectation of such action in other conditions has little logical basis.

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when the doctor himself falls victim to an erroneous belief in their action. Antihistamines may act as placebos, so may tranquillizers (though bad ones to use) improvement of the disease may be attributed quite wrongly to the specific action of the drug itself, an erroneous state of mind that does a disservice to medicine.

It can be shown that the subjective symptoms of about thirty per cent of patients can be influenced solely by inert preparations—even injections of sterile water can act like morphia. The greater the belief of doctor and patient in the agent used the greater the effect.

The requirements of a placebo are

It should be harmless and without side-effects or risks.

It should be given knowingly and without self-deception on the part of the doctor

It should be cheap.

No other satisfactory treatment for the disease in question should exist.

The placebo is often unpleasant in flavour and coloured in appearance in order to reinforce its effect on suggestible patients. It is often a drug which has become obsolete as its specific effect has become discounted—expectorant mixtures, for instance the same may be said of vitamin B_1 in the treatment of lichen planus. As the natural history of various diseases becomes better known, the uselessness of many forms of treatment becomes recognized. Possibly all treatment for alopecia areata is really placebo treatment. It is important that the doctor and nurse do not deceive themselves that in giving such treatment they are influencing the disease.

When it is used, a placebo must always be given with assurance and confidence some would say that the assurance alone is sufficient, and would dispense with the placebo

Some commonly used agents are inert tablets, calcium lactate, mist. gent. alk. mild antihistamines without side-effects aspirin

CHAPTER 9

Rest Sleep Diet and Drink

REST

This is the most important single therapeutic measure in dermatology as in all medicine. It forms the basis of treatment for any acute inflammatory condition, particularly eczema and the neurodermatoses.

An inflamed skin is very vulnerable to irritants and changes of environment. Only by resting it completely can these be avoided entirely

The itching that accompanies inflammatory changes leads to rubbing and scratching and this excites further inflammatory changes. Rest reduces the threshold of itching and protects the skin from the effects of scratching.

In extensive eczematous conditions, rest must include that of the whole person and personality since the stimulus to activity of the skin condition may lie in emotional tension and conflict.

How to Obtain Rest for the Skin

(1) If the inflammation is confined to a small area on the hand or arm, simple common-sense measures to bring about local rest will be successful. These must include the avoidance of all external irritants, protection from climatic extremes, and the restriction of movement and friction.

When the legs are affected, rest implies a reduction in the gravitational thrust. Prolonged standing or sitting causes an increase in the volume of the leg by the gradual accumulation of oedema, and the leg should be raised high enough to counter this mechanical disability

When the beard area is inflamed, shaving should be restricted to alternate days or less.

When light-exposed areas are affected, the patient must shade his face and neck and cover his arms—or remain indoors and away from windows.

(2) In widespread, irritable eruptions and acute eczema of the groins, thighs and legs, the principle of rest must be carried further Movement and friction of the skin can only be avoided by resting the patient completely Putting the patient to bed is far better than allowing him to lie downstairs on a couch. In bed, he accepts rest as a necessity on a couch as a convenience. The temptation to pot ter about is irresistible. In bed all household contacts are removed and treatment is better controlled. Bed linen should be light and the patient should wear cotton, linen or poplin next to the skin. Pyjama trousers should be avoided where the groins, thighs or buttocks are affected, since these lead to chafing, heat and sweating in the crutch. Blocks under the bed and a cradle are of value when the legs are affected. The room should be kept at an equable temperature. If the patient is able to use his hands, diversionary occupation should be encouraged.

Any acute eczematous condition takes three to six weeks to subside under the best possible conditions. The patient with a widespread attack must be prepared to stay in bed for that length of time, and should be told so at the outset. If he is resting completely if the cause of the eruption has been removed and if secondary factors of persistence, such as scratching, rubbing and anxiety are controlled, resolution will occur naturally Treatment must be simple, bland and guaranteed not to inflame the part still further In most conditions the patient may be allowed to go to the toilet and, as improvement occurs, to sit up a little during the day It is wise to be cautious in allowing this, as the patient will almost invariably exceed the terms of his permission. An otherwise able-bodied person who is not in pain is likely to become very restless when confined to bed. Many devices must be used to counter boredom if he is to be kept there happily

Older patients should not be confined to bed unnecessarily as broncho-pneumonia and bed-sores quickly develop. Even at the expense of prolonging treatment they should be kept active for a short period each day or at least allowed to sit out of bed.

Such are the *physical* aspects of the problem of rest. The *psychological* aspects are also important. A patient in bed, especially if he is away from his home environment, has escaped temporarily from a situation that has become intolerable, or a conflict that cannot be resolved. If this has played any part in his skin eruption, his isola tion may provide him with a retreat from the difficulties of the moment and a period in which he can recover his equilibrium. When

he returns to the scene of his conflict he may well relapse but he is now better able to adjust himself to its presence. A holiday serves the same purpose. Adult patients with atopic dermatitis, whose tension and agitation is aggravated by the irritability of their skin, usually improve dramatically in hospital whatever treatment is given. Children with infantile eczema also respond immediately if removed from an environment in which both mother and child are becoming irritable and distraught.

SLEEP

Diseases associated with irritation, such as eczema and dermatitis, are always worse at night, when uncontrollable spasms of irritation occur either before the patient falls asleep or as a result of the rise in skin temperature that takes place three or four hours after Scratching often continues unconsciously *during* sleep Sedatives are frequently needed but should not displace general measures. Freedom from anxiety reassurance by the nurse, and time spent patiently carrying out the evening dressings bring relaxation and a better hope of sleep. Of all patients, those with severe pain and those with irritation are most afraid of the night. Sleep is a very personal matter and its pattern varies. It cannot be regulated to the clock or made to conform to administrative tidiness. One patient is used to falling asleep early another may never have gone to bed until midnight. To reduce them to the conformity of lights-out fatigues the one and upsets the other Both will itch the more. Fill the day with as much activity or interest as possible and let the evenings be passed quietly and agreeably Discourage excitement and stimulant drinks, particularly coffee, if the patient is at home.

Hypnotics

In most cases these will be prescribed individually The following remarks are for the general guidance of the nurse who is looking after skin patients. She should be able to report whether their sleep is aden te or whether the sedatives they are having are ineffective.

Antihistami variable effect. The given instead of barbiturate atients but have li otic action on others. The ta timed so that t ect is reached when sleep is r case of Phener is reached e hours, zan and Bena and a urs.

Mist chloral, B.P.C. is seldom sufficiently potent to act alone, but helps to calm and quieten anxious patients. The normal dose is 20–30 grains.

Barbiturates. It is important to recognize which of these drugs act for a short, and which for a longer period. (See Appendix, pages 268–9.) If a patient consistently wakes between 2 and 3 a.m., it is useless to give a short-acting barbiturate. If his main difficulty is in getting to sleep, a very short-acting drug may overcome this and allow him to pass into natural sleep thereafter.

Of all the barbiturates, barbitone gr 5–7½ sodium amylobarbitone gr 1½–5 pentobarbitone gr 1½–3 and quinalbarbitone gr 1½–3, are most commonly used. In cases of extensive eczema and neurodermatitis, or where the patient has been taking barbiturates for a long period, a relatively large dose may be required to obtain satisfactory sleep. Combinations of barbiturates should be arranged individually. Patients become accustomed to these drugs and they may have to be changed from time to time. There are dangers of toxicity as well as of idiosyncrasy. Large doses of barbiturates should not be given together with antihistamines except under in-patient observation.

Emplets or delayed-action pills, the coating of which is slowly absorbed in the stomach, releasing the active ingredient, are often useful. For instance, Emplet Seconal gr 1½ is released some four to six hours after being taken. This can be combined with any short acting barbiturate.

The carbromyl-urea group of hypnotics is a very useful one, but in some patients a characteristic purpuric drug eruption occurs. (See Chapter 31.)

When all else fails, paraldehyde by mouth or intramuscular injection *is very effective, particularly in psychotic patients and those* with senile dementia. Here the sleep rhythm is frequently reversed.

NOTE In suggestible patients a placebo may be sufficient to ensure continued response once the habit of sleep is regained. It should be accompanied by exact and detailed instructions. Injections of distilled water aspirin, sodium bicarbonate, appropriately coloured pills, or hypnosis itself, have all been used successfully.

Training in muscular and mental relaxation is of considerable value as a hypnotic and many patients will fall asleep while carrying it out. This is not far removed from the state of auto-hypnosis, whereby a person can doze off at will. It must be accompanied by an unravelling of the sleave of care and freedom from all mental and emotional tension. Once the patient knows he can sleep he is

likely to do so with an increasing amount of faith and a diminishing amount of drugs.

Sedation

The amount of sedative required during the day varies enormously from patient to patient. Those with marked tension require most, but sometimes quite a small amount is sufficient to produce a lessening of anxiety and of itching. The correct amount should be gauged to start with. For the elderly and those in pain, aspirin in adequate dose is a good sedative (though a poor hypnotic).

Basic sedation by day

This is achieved with one of the following

(*a*) Phenobarbitone gr ¼ or amylobarbitone gr ½ two to four times a day Soluble phenobarbitone in mist. gent. alk. is also used.

(*b*) Mist. brom. et valerian (particularly for hysterical states) ½ oz. three times a day

(*c*) Drinamyl (a mixture of amphetamine and amylobarbitone), 1 tablet three times a day Anxine or Seconesin, both of which contain mephenesin, a muscle relaxant.

(*d*) The so-called tranquillizing drugs—particularly useful when anxiety and tension are marked, but having certain undesirable side-effects.

NOTE (1) Patients on sedatives should be warned not to take them at the same time as alcohol. Only very small doses should be given if at all, to a patient who has to drive a vehicle, and he should be told of the possible effects.

(2) One should generally increase the dose towards the evening and give little or none in the morning, especially if a long-acting hypnotic is given at night.

DEEP SEDATION

Deep sedation is necessary in some patients with extensive and highly irritable skin conditions associated with agitation or depression. At the extreme limit this passes into the technique of deep narcosis.

A state of prolonged drowsiness is achieved by the repeated administration of barbiturates every four to six hours. High doses are usually needed, and the treatment should not be given to the elderly for fear of bronchopneumonia, or to those with liver or kidney disease. Close supervision must always be maintained.

In skin therapy it is seldom necessary to achieve more than drowsiness during the day the patient should always be able to wake at mealtimes.

Phenobarbitone is not a satisfactory drug for this purpose, or indeed, for the *prolonged* sedation of any skin patient, as it has a marked depressing effect.

Barbiturate drug rashes are not uncommon. The first sign may be an increased irritability or restlessness and an apparent loss of the sedative effect.

Narcosis

The introduction of tranquillizing drugs has led to a new technique of narcosis. Chlorpromazine is used in the following way

For a tranquillizing effect Doses of 25–50 mg. three times a day are increased to 75–100 mg. three times a day according to the degree of tension or anxiety present. The sedative action can be enhanced by adding Phenergan 25 mg. and barbitone 5 grains at night.

The full narcosis technique ("hibernation") consists of giving these three drugs together three times a day This needs expert supervision and control, since hypothermia develops and the blood-pressure drops. When heavy doses of chlorpromazine are given, the blood-pressure should be recorded daily Sensitivity to the drug shows as

1 Sudden or excessive hypothermia or hypotension.
2. Jaundice—obstructive in type and reversible
3 Drug rash, with or without fever often of light-sensitivity pattern.
4 Leucopaenia.

Chlorpromazine should not be given to patients with a history of sulphonamide sensitivity or jaundice.

[A Table of Hypnotics is to be found in the Appendix.]

DIET AND DRINK

Though special diets are seldom called for in the control of particular dermatological conditions, any excesses or deficiencies of diet should be corrected as a logical measure in treatment.

The presence of concomitant metabolic or alimentary disease such as diverticulitis, gout or diabetes, calls for the diet appropriate to that condition. These will not be considered here.

The preparation of special diets, if they are to be palatable, calls

for a high standard of imaginative catering, cooking and presentation.

Indications for Certain Standard Diets

Weight reducing Obese patients with intertrigo or gravitational ulcers. The calorie value varies from 800 to 1200 a day For such a diet to be successful

(*a*) the patient must be prepared to accept the pangs of hunger and to persevere with the diet at home

(*b*) relatives must understand that the diet is a self-imposed discipline, and not a penance to be thwarted by surreptitious gifts of food. Chocolates, biscuits and fruit are frequently consumed in considerable quantities by a patient who, when questioned, will strongly deny any knowledge of the cause of her increase in weight while dieting

A certain amount of excess weight may be due to water retention or to pituitary gland imbalance Many patients are resistant to weight-reduction by diet alone. It has been demonstrated convincingly that obesity can represent a psychological compensation for unhappiness it may occasionally be unwise to force a patient to lose weight against her will.

A significant and satisfactory weight-loss may be achieved, not by reducing the total calorie intake, but by restricting the carbohydrate intake severely and alternating an almost completely protein diet on one day with a vegetable and fruit diet on the next.

HIGH PROTEIN DIET

This is given to patients with bed-sores, pellagra, other avitaminoses and conditions associated with cirrhosis of the liver It is also indicated in patients with pemphigus, pemphigoid and exfoliative dermatitis, when a considerable amount of protein may be lost daily through the scales

A high protein diet is difficult to assimilate and the proportion of protein should be increased gradually It must be presented attractively and given, if possible, in small quantities frequently Casilan, or one of the dried protein supplements, may be given in milk or orange drinks as a means of increasing the protein intake.

LOW CARBOHYDRATE DIET

This consists of a diet of 1200–1500 calories with 100–150 grams carbohydrate.

It is used in conditions such as chronic staphylococcal infections, boils, carbuncles, extensive infective eczematoid dermatitis, seborrhoeic eruptions. It is also given, with appropriate variations, in obese elderly diabetics, and as the basis of reducing diets.

General Considerations

1 There should be an adequate intake of vitamin B complex and vitamin C for all patients on restricted diets.
2. Condiments, spices, curries, frequent cups of tea and coffee and all highly seasoned food should be avoided, especially in rosacea.
3 The amount of protein taken is more important than the amount of carbohydrate.

Special Diets Advocated in some Dermatological Conditions

It was the practice in the past to advocate a variety of diets appropriate to various dermatological conditions. Success has sometimes been obtained with completely opposite diets in the same condition for instance, in psoriasis. If the dietary change has any effect at all, it is possibly due to the shock of the sudden change and not to any intrinsic virtue of the diet itself.

1 *Low fat diet* Given in the lipoidoses and xanthomatoses. It has been used for acne and psoriasis. Avoidance of egg-yolks, pork, bacon, chocolates, sausages, fried food, butter cream, cheese. A difficult diet to sustain for long.

2. *A low nitrogen diet* has also been used for psoriasis. Omit, or take very small amounts of, green vegetables, cheese, eggs, fish, meat, milk and oatmeal.

3 *Non-allergic diet* This is used to a varying extent in the elucidation and control of allergic conditions. Sensitivity to foods is probably not a common cause of skin disease (though some atopic individuals may be sensitive to egg-yolk, fish and cow's milk in early life). The non-allergic diet is built up gradually after twenty-four hours of fasting.

Drinks

Spirits are to be avoided in any extensive skin disorder particularly if taken on an empty stomach or at night. Beer light wines or stout are allowed with meals. The patient who has been used to drinking spirits may be able to change to wine or stout instead, and these should be allowed rather than risk having a total prohibition disobeyed.

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medical care of the patient, and any symptoms or signs suggestive of a carcinoma (particularly of the prostate, stomach and lung) must be followed up. It is no credit to anyone if a patient being treated with success for his skin condition dies of an undetected medical cause. Interest in the skin must never be allowed to over shadow a careful general examination of the patient.

The routine examination of all skin patients in hospital should include special attention to the following possibilities

Carcinoma Lungs, stomach, prostate and breast. (Do not omit rectal examination.)

Diabetes Glycosuria may be absent if the renal threshold is high.

Anaemia Search for the cause.

Tuberculosis Hidden tuberculosis in the young adult or aged bronchitic.

Thyrotoxicosis Anxiety and loss of weight.

Myxoedema Puffiness of eyes, lethargy and slow pulse.

Nephritis Anaemia, uncontrolled infection

Cardiac failure Oedema of lower limbs, dyspnoea.

If these conditions are looked for carefully as a routine, the occasional disaster caused by focusing attention on the skin will be avoided. In all the examples given the disease may be concealed ignorance of its presence and neglect of its treatment carry a heavy price on the conscience of the doctor Nurses are often in a better position to learn of symptoms that a patient has been afraid to tell the doctor such as excessive vaginal bleeding, loss of weight, or a lump in the breast.

CHAPTER 11

Infectivity

It is a commonly held belief that most skin diseases are infectious This is fostered by a spate of advertisements dealing with germs and dirt and advocating antiseptics and cleanliness. In fact, very few skin diseases are due to catching anything and fewer still have any direct relationship with dirt. There are only six skin diseases commonly met with that can be considered markedly contagious

Ringworm of the Scalp. This is found among schoolchildren, or in institutions, particularly in boys. It is highly contagious. It scarcely ever affects those over the age of puberty Ringworm of the body skin, such as tinea cruris, is contagious in communities and schools.

Impetigo. This has a moderate degree of infectivity in adults. Epidemics of the bullous (staphylococcal) variety occur and impetigo neonatorum (pemphigus neonatorum) is a severe type occurring in infants—highly contagious in maternity wards and nurseries.

Syphilis. The primary chancre is, of course, contagious. In the secondary stage of haematogenous spread, spirochaetes may be recovered from the lesions (which may be widespread) and especially from those that are moist. An initial injection of penicillin is usually sufficient to destroy circulating spirochaetes and render the patient virtually non infectious within a few hours.

Warts. To a varying degree, depending greatly upon individual susceptibility

Among the infestations, a heavy infection with the acarus of scabies in the rare form of Norwegian scabies is highly contagious and has given rise to epidemics in wards (especially in mental hospitals)

Pediculosis is contagious by close contact.

For practical purposes, other conditions may be regarded as non-infectious. Even leprosy which occurs from time to time in England, is almost always in a non-infectious form and can be admitted to the wards and treated in the normal way

In view of the common feeling among patients about the infectivity of skin disease, it is very important for the nurse to establish confidence at the outset by telling the patient (if she reasonably can) that the condition is neither infectious nor contagious (and saying it in a loud-enough voice to impress the neighbours on either side!). The psychological feeling of dirt and uncleanliness may be so great that the very fact of touching the patient will restore a tremendous amount of confidence.

HOSPITAL PRECAUTIONS IN CASES OF INFECTIVITY

Cases of impetigo are seldom admitted into hospital for treatment unless severe, when the patient should be isolated until appropriate antibiotic therapy has been established. Though these patients rarely seem to infect others in the ward, there is some objection to admitting anyone affected by a strain of staphylococci which have become resistant to antibiotics. However this applies equally to patients who may be carrying such strains without any clinical manifestation of skin disease. The objection seems theoretical as long as open wards and infected blankets remain.

But great care should be taken not to admit such cases into a children s ward or if there is any contact with nursing mothers or surgical patients. If such cases arise in these wards, immediate isolation and the exhibition of an antibiotic are essential. The attendant nurse should at the same time reduce hand and nasal carriage by scrupulous washing and the nasal use of a suitable bactericidal or antibiotic agent. Neomycin, soframycin and Graneoidin ointments are effective, but other non-antibiotic creams may be found to be as valuable and indeed preferable

SCHOOL AND FAMILY CONTACTS

Contagious Conditions at School

The most important are *ringworm* infections, particularly of the feet and, at boys schools, of the groins. Common sources of the former are shower-baths and swimming baths. Precautions should be taken against pools of water remaining in shower-baths and the use of communal towels and gym-shoes. Though it is never possible to eradicate the condition entirely it should be kept under reasonable control by measures along these lines. There is no doubt that some people are much more prone to become infected with ring worm than others.

WARTS (VERRUCAE)

These are also common. Measures directed at foot hygiene in swimming baths and shower-baths are worth attempting without too much hope of success.

IMPETIGO

This occurs particularly in the younger age-groups and where resistance is lowered by other epidemics. The infected child should be isolated in the acute stage.

BOILS

Occasional outbreaks of staphylococcal infection occur in the form of boils. Epidemics in closed communities have been traced to one nasal carrier of a virulent staphylococcus. Nurses themselves frequently act as such carriers.* Such epidemics are rare.

RINGWORM OF THE SCALP (TINEA CAPITIS)

This remains the most important contagious skin disease. When it occurs in school communities immediate steps must be taken to isolate the patient until all contacts have been examined under the Wood's light (see Chapter 44)

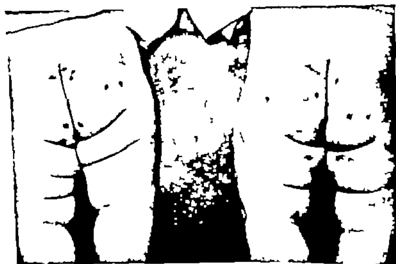
Family Contacts

Owing to the different susceptibilities and ages, few of the above diseases are likely to spread through all members of the family Impetigo, however may pass from mother to child and then from child to child, particularly when it is of the superficial bullous type.

Scabies has no respect for persons or ages and will affect all members of the family from the eldest to the youngest. Indeed, it is a confirmatory sign in scabies to find lesions on another member of the family particularly on the wrists and nipples of the mother of an infested baby

* The carriage and spread of a virulent strain of staphylococci (usually via the nostrils) by either a patient or a nurse in maternity wards has lately resulted in an increasing number of epidemics of skin sepsis in mothers and children. This is giving rise to much concern.





I. Similar twins with similar napkin rashes





11. Haemangioma, showing spontaneous resolution without treatment



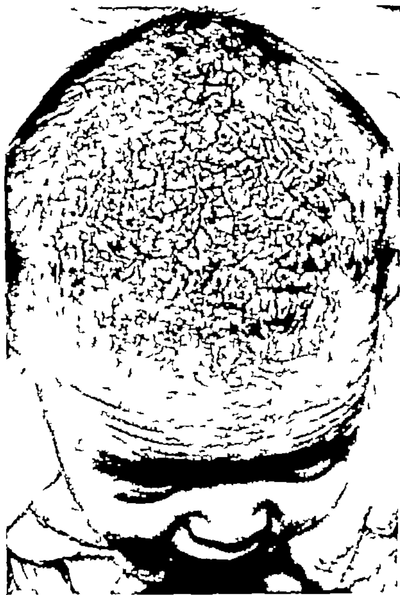
(a)

III. Ichthyosis, presenting as erythroderma of the new-born ('Collodion baby')



(b)

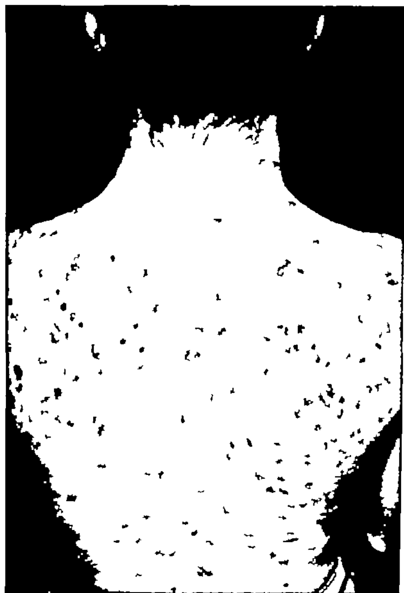
The patient three years later



IV Extensive 'cradle-cap



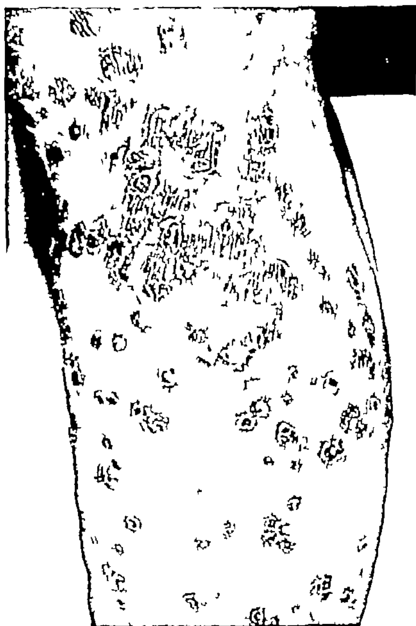
V The follicular adolescent type of acne



VI. The cystic, scarring type of acne



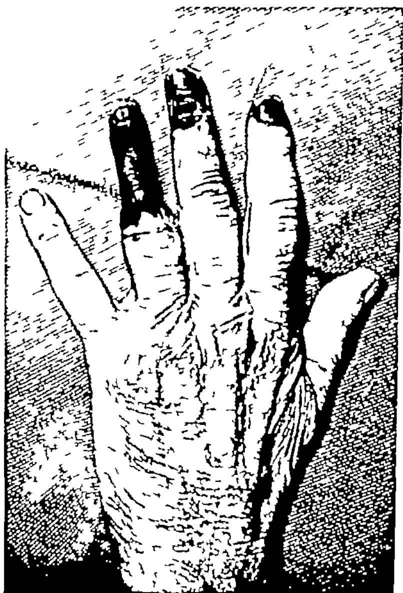
VII. Eczema in the acute, 'weeping' stage



VIII. Psoriasis. Typical lesions on the leg



IX. Psoriasis. A plaque on the knee



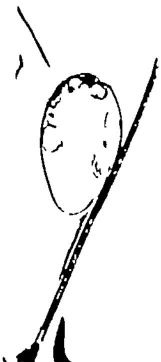
X. The effect of cold. Gangrene following frost-bite

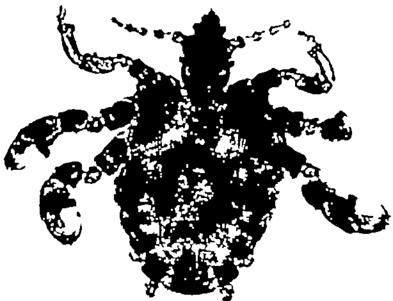


XI. The effect of cold. 'Spring eruption' of ears

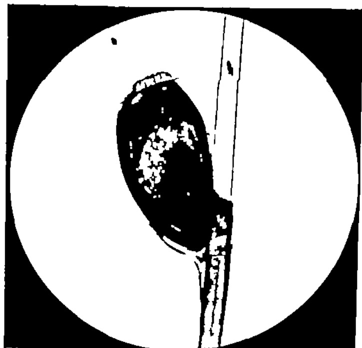


XVI. Cattle ringworm

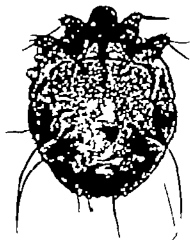




XVII. Phthirus pubis, the pubic louse, with nit



XVIII Nit of scalp louse, showing adhesion to hair by chitinous sheath



XIX. Sarcoptes scabiei (female)

CHAPTER 12

Management of the 'Chronic Case' and of the Neurodermatoses Rehabilitation

THE 'CHRONIC CASE'

While some diseases are, by their nature, chronic and of long duration, others, essentially curable, are difficult to overcome when they occur in patients endowed with an inadequate constitution, physical or psychological. Unable to come to terms with their disease, they may use their illness to enhance self-pity or as a prop against a world they believe to be hostile. Not all such patients are bereft of intellect—or of courage. The names of many writers and poets, and even of famous men and women of action, will readily come to mind in this respect.

It takes an effort of imagination to surmount a chronic or incurable skin disease which is continually visible to the patient and his relatives. The nurse who deals with him may have to undertake the effort on his behalf and in addition perform an act of faith.

When cure cannot be expected, as in scleroderma, atrophic conditions and generalized developmental anomalies, the patient should be led gently and gradually to accept his disability as best he can. If he has the character to do so he will overcome it, as he does other misfortunes of life.

Thus is the course of disease modified by the character of the patient. Stamina, patience and good humour will stand him in good stead. The patient who endeavours to fight the disease unceasingly is particularly difficult to manage. His itching and scratching reflect his irritation at being ill. A remarkable improvement will sometimes follow a conversion to acceptance and resignation.

Differences in behaviour in illness follow patterns that are determined by the race, caste, social status and early influences of the patient. In the last resort it is probably these manifestations of character that determine the curability or otherwise of a generalized attack of eczema.

The intelligence of the patient and his ability to follow instructions should not be taken for granted. General intelligence in matters concerning the skin—as in other things—does not necessarily go with social position or even with special intelligence in one sphere. The superficially intelligent patient is more likely to question every treatment and impose his own ideas on a subject which is outside his knowledge. He is more inclined to be anxious, and needs a greater amount of sedation, reassurance (and even bullying) than the simple person who tries to understand and accept what is done—though he may do so only incompletely

The attitude of other patients in a ward is extremely important, *especially when skin patients are nursed in a general ward. They* may be ostracized or regarded as unclean by the other patients among themselves an attitude of despondency or depression may spread. The wise Sister will watch for signs of this and shift beds when it seems advisable.

Faith

The nurse should never let slip, in the patient s hearing, words that destroy his faith in her ministrations. Persons with skin disease are frequently sensitive and quick to see hidden meanings in expressions and tones of voice. Do not talk lightly of gangrene, cancer and infection, of contagion and incurability During psychosomatic illness in general, the patient who has faith in his doctor and nurse transfers to them his fears, anxieties and hopes. His confidence must not be destroyed by any word or act.

Relatives

Study Job s comforters. A patient's relatives and friends are not always helpful. Sometimes they sustain his morale and encourage his hope, while acting as his link with the outside world. But being a comforter is an onerous task and one which demands skill and tact. He may find himself in the unenviable position of having to bear the brunt of the patient's dissatisfaction at being ill. Anxiety ill-temper and irritability are often taken too seriously

He himself on the other hand, may show his own resentment against the patient, when family difficulties exist. An astute Sister or nurse is often able to glean much of the patient's home back ground and anxieties from a relative s unguarded phrases and remarks. Always try to make the relatives allies in the management of the patient. They have certain tendencies which act against this. By undue commiseration they may undo the precepts and counsels

of hope which have been so carefully given. They may unwisely offer food when the patient is dieting, or smuggle in miraculous ointments which lead to sensitization. They may bring unwanted news of difficulties at home, or by their presence reawaken the very conflicts which the patient has been brought into hospital to avoid. When a nurse thinks that a particular visitor is the cause of upset she must tactfully indicate that it would be wiser to stay away In infantile eczema it is sometimes better to allow the mother a complete rest from the child until his progress is assured. This gives a respite from the mutual tension and exasperation that is often the culmination of months of struggle. Once such a respite has been gained, she should be encouraged to watch, and then to undertake, the routine treatment of the child.

Occupational Therapy

This is of obvious importance in providing skin patients with distraction during long periods of treatment in chronic conditions. Much more use should be made of sensible forms of diversionary therapy

Discharge from Hospital

The management of a chronic skin condition does not end on discharge from hospital Relapses are common on returning home. These occur despite a continuation of treatment that is to all out ward appearances the same. Sometimes a return to the environment of his home—stresses of business, bills and personal relationships—invites an immediate relapse. In others, habits of living—crowding over a hot fire in a draughty room, or keeping irregular hours—precipitate the relapse The Sister and nurse must see that the patient appreciates *exactly what he can and cannot do* on returning home, and what steps he should take if any relapse occurs. If he has suffered from a contact dermatitis of unknown cause, he should be warned to keep an accurate detailed diary of everything he does from the time he returns to his house A relapse may then lead to recognition of the responsible agent.

The Desire to Recover

Sometimes this is obviously not present at others it may be professed but unconsciously rejected. Illness can serve as an excuse for difficulties, and serve the patient well. Different races behave differently in this respect. Some show a peculiar listlessness and apathy in the face of disease. Animals, when they are hurt or ill, seek refuge and solace in a hidden part of the forest, to lie there until nature

heals, or kills them. This same desire for solitude is sometimes seen in patients. It neither constitutes a desire to get well, nor the reverse merely a passivity in the face of attack. It is an unwise nurse who attempts to jolly such patients into a false atmosphere of bonhomie and corporate life. The phase is usually shortlived. But if it continues and is accompanied by other signs of depression, and if the patient loses all humour or insight, such an attitude must be taken more seriously As an organic depressive state develops, the withdrawal deepens, and the patient begins to lose touch with the realities of life. Psychiatric help is urgently needed for these patients, who are seriously ill.

A final remark should be made about old people admitted to hospital. Uprooted from their home perhaps for the first time in their lives, in strange surroundings and among unknown people, they may pine, like an animal in captivity and die for no obvious cause or reason. Such elderly people, especially those in country areas, need more nursing and attention than others whose diseases are more severe. They should not be left in hospital longer than absolutely necessary

THE PATIENT WITH A 'NEURODERMATOSIS'

When a patient s skin condition is attended by grave psychological difficulties, or when his personality and environment weigh heavily in the balance against him, one is presented with a very difficult problem of management. The term neurodermatosis is used in different senses, but it may be applied, broadly to those examples of eczema, lichenification, prurigo or pruritus where strong psychological factors initiate or influence the disease.

The remarks that follow are not in any way a complete guide to the management of these patients this can only be learnt by experience. But they embody certain principles which must be borne in mind by anyone dealing with the problem.

The Psychotic Equivalent

A neurodermatosis, like other psychosomatic affections, may be a compensation, and in some way a solace, for a patient who is at cross-purposes with life. In this sense it may even be necessary for his emotional balance, and any treatment directed to its eradication will be unsuccessful, even followed by an overt nervous break down It is not uncommon for instance, to see prurigo in a depressed patient disappear and be followed by a frank depressive

psychosis. When this, in its turn, is cured, the skin condition may return. Treatment of localized patches of lichenification by occlusive bandages or X-ray therapy is not infrequently followed by the appearance of lichen simplex elsewhere, or of another symptom altogether It may be better for the patient to scratch a small area of skin than to succumb to an anxiety state. To search out and help the patient to understand the situation which confronts him, even though it may not be possible to resolve it, is much more rewarding than to attempt the removal of some superficial expression of his fears. If he has insight into the difficulties and an ability to adjust in time to these, his skin condition will probably need little active treatment beyond reassurance and encouragement. In the same way an extensive eczema may resist treatment, only to resolve completely and suddenly when some situation in the patient's life changes.

Secondary Anxiety

The presence of skin disease, especially in a middle-aged worker may itself produce a situation of stress. Here, immediate active and intensive treatment must be carried out to reassure and rehabilitate the patient as quickly as possible.

When a patient is unduly anxious about some relatively unimportant or obviously harmless condition, one must think of two possibilities.

First, the patient may really be worrying about cancer venereal disease, leprosy and so on. The fears are not expressed openly The unknown is always magnified —especially if anxiety is present. When he does not know the patient dare not ask. It is wise, and humane, to draw out a confession of such fears and to combine reassurance with a full examination and any confirmatory investigations that will relieve the patient s anxiety

Secondly he may have a particular fear which bears no relation to skin disease, but which becomes fixed on to any trivial matter at hand. It is better for the patient's pride, and probably for the balance of his life, to be worried about a patch of fallen hair or a harmless mole or skin tag, than to have to admit his failure in dealing with some personal relationship or conflict. The anxiety exhibited is quite out of proportion to the nature of the lesion and cannot be allayed by reassurance which is, of course, directed at the wrong target. Such patients may suffer extensive grafting and other surgical operations. In its extreme form this condition must be regarded as psychotic, a symptom of severe mental illness.

Recognition by the Patient

Anxiety associated with skin disease may therefore be primary or secondary In patients with neurodermatoses it is primary though the condition itself may lead to further anxiety It will be recalled that Job s dermatitis did not improve until he had come to recognize the faults in his character a process that is often as prolonged as his was and as tedious to the patient as to his physician. The complexities of the human mind, the difficulties of analysing and assessing the emotional stresses of the individual, often quite unknown to the patient, make the treatment of this group of conditions a particularly difficult one. When the functions of the body are faulty the patient recognizes it by some symptom or sign which he is able to describe (though perhaps not accurately) when the function of the mind or emotions become disturbed, he cannot appreciate it, because the powers of thought and reasoning themselves are subject to the same errors.

During discussion with the patient it may be noticed that a particular subject is evaded, or answered with an excessive display of emotion. Those whose ear and mind are attuned to this possibility are thus provided with clues which may be followed up to advantage.

Transference

Such mechanisms as repression and transference occur readily They will not be discussed here, except to say that transference may be positive in the sense of an attachment to the figure of the physician or nurse, or negative in the sense of resentment and unconscious antipathy This will show itself in the failure to carry out any treatment or in an avowal that medicines are useless, oint ments unsuitable. The patient who has seen many doctors and who sits in the chair with an air of satisfaction and willing unwillingness is one that unfortunately provokes an attitude of resent ment on the part of the doctor or nurse, which further hinders therapy

When patients with anxieties are faced with someone whom they believe to be sympathetic, they readily talk about their troubles and difficulties. It should not be necessary to state, though it unfortunately is, that no moral judgement should ever be passed, consciously or unconsciously upon aspects of the patient s history of behaviour that come to light. Any such attitude is liable to create further antipathy and hostility and to counteract the effect of therapy Nor

must positive advice on the reorganization of their personal relationships ever be offered. General advice on the conduct of their life and the care of their skin should be given, but the solution to any conflict that has a moral basis is given at a physician's peril and will more often than not rebound upon him at a later date.

REHABILITATION

(*Note* This section is chiefly intended for the hospital nurse)

Rehabilitation implies the long-term reconstruction of a patient's life, working habits and skills following limitations imposed by disease. Though usually associated with orthopaedic practice, both the term and the concept may legitimately be applied to such dermatological problems as the following

Industrial Dermatitis

A more detailed account is given in another chapter Rehabilitation should start at the moment the patient enters the ward for treatment. Uncertainty about his future life and working capacity causes a worker much anxiety and the prospect of a long period in hospital without earnings adds a further stress to a situation already complex and difficult.

Since the problem of industrial dermatitis is so often [illegible] of constitutional eczema in the working man, we may bear it in mind while considering the following subjects.

Chronic or Relapsing Skin Conditions of an Extensive Nature, such as Pemphigus

Where it is obvious that the patient's disease is likely to [illegible] or to remain to some extent incurable, the problem of his whole future life and working capacity must be faced. Too often this is neglected because of the problem it raises in the mind of the medical officer in charge. These are likely to be as difficult as the [illegible] itself and may be insoluble. It would be a counsel of perfection but nevertheless humane as well as logical, to arrange for the almoner to interview all breadwinners in the ward who are expected to be under treatment for more than a month. But the help needed is not only financial it is also spiritual and psychological. The patient should be told the nature of his disease and the length of time he is likely to be affected, so that he can adapt himself both to the treatment and to his future earning capacity The nurse is often in the

best position to learn the patient's particular anxieties, whether domestic or financial. His relatives may also throw light on these. Early in the treatment arrangements should be made by the rehabilitation officer or the patient's works manager for a period of convalescence, so that his eventual return to work is assured and the patient knows it.

Patient with Long-standing Hypostatic Ulcers

This is fully discussed in chapter 35. Every effort must be made to restore normal function to the affected leg. If a number of patients are being treated for this condition in clinics or in hospital, group therapy and exercises may be employed with advantage and a competitive spirit introduced where despairing acceptance existed before. If the patient is in hospital, increasingly long walks should be taken each day

Housewife's Dermatitis

The prevention of recurrence in this condition depends upon re-education of the patient in the organization of her daily housework. If the ward routine is flexible enough to allow this, the patient can be trained, in the later stages of her stay in hospital, in the routine use of barrier cream, rubber gloves, mops and other protective devices

The Young Patient with Atopic Dermatitis

Where an exacerbation of an atopic dermatitis has been brought about by psychological stresses in the young adult, social and domestic factors may need adjustment. Relaxation and breathing exercises may also be helpful.

In brief then, rehabilitation, when applied to skin patients, demands

1 An assessment of the patient's attitude to his disease, and his working prospects in the near and distant future.
2. An assessment by the nurse and the almoner of the patient's social and domestic situation and of any anxieties that may be connected with these or with his work.
3 An attempt by the doctor to bring the patient to realize the presence or importance of any adverse factors and to adjust to these.
4 An arrangement for special forms of help, such as can be given by the district rehabilitation officer almoner occupational therapist, etc.

5. The employment of diversionary therapy or occupational therapy to keep the patient occupied during his stay in hospital. These should be graduated so as to preserve the impression of returning to health and capacity
6. Individual advice from the doctor before the patient is discharged, to explain the nature of his skin condition and to make sure that he understands clearly what precautions he must take to minimize recurrences

To find a way of life for the neurotic or mentally ill-equipped patient whose skin breaks down repeatedly is no easy matter There is a very natural tendency to heal this type of patient as quickly as possible and then see the back of him, until he reappears in relapse. Despite the difficulties, a sincere attempt at rehabilitation should be made to avoid his drifting towards a situation of complete dependency and being of little use to his family and without faith in himself.

The human problem is always part of the dermatological problem, and in cases like these it may altogether override the problem of the skin itself An astute and experienced nurse will pick out these patients as soon as they are admitted into hospital and may herself be able to go some way to reversing the situation. It must be said, however that in many cases the inadequacy of the patient's personality a poor genetic constitution and a wretched environment combine to defeat every effort of rehabilitation.

THE ROLE OF THE ALMONER

The work of the Lady Almoner has undergone a great change since the introduction of the National Health Service. No longer concerned primarily with matters of finance, she is able to help with the social and personal difficulties of patients referred to her The good Almoner is trained to perceive, or find out, where these difficulties lie she has at hand the facilities of numerous organizations that may be able to help. She knows which convalescent homes will suit which patients and can arrange holidays through various benevolent societies. After she has worked for some time in one area, she will often know something of the patient's family his housing conditions and his background.

Not only has she this knowledge, but she is invariably possessed of that social tact that enables her to make direct approaches to employers, employment agencies, District Rehabilitation Officers

and Medical Officers of Health, to the benefit of the patient and without the formality that often attends official communication.

With the growing complexity of modern life, the individual becomes lost in a sea of regulations that he does not even understand. When a man becomes ill, he worries about his family his income, his future. These fears do not reach the doctor (who may even be unaware of them) We are all apt to think of a Benevolent State making provision for every need. But of course this is not so The Almoner can explain to the patient what he must do, what steps he should take, and how his family can be looked after if his illness is a protracted one.

In dermatology we have to deal with some diseases that last for weeks and some that relapse time and time again. We have to deal with problems of industrial dermatitis, where the worker may be forced to change his occupation or where medico-legal issues are involved. In all these cases the Almoner should be asked to help Though her help and advice may not be needed in every case, she will never be an intruder

Finally one should not forget the help that she can give to psychiatric patients, those in whom skin diseases are caused or perpetuated by conflicts in personal and domestic relationships. In all such cases, the help of the Almoner might well be obtained before that of the psychiatrist.

CHAPTER 13

Physiotherapy and Radiotherapy in Skin Disease

PHYSIOTHERAPY

There are few conditions in which physiotherapy is of specific curative value in dermatology though it is often used as an adjunct to other treatment. Simple and modified aspects of physical medicine may frequently be adapted for routine use in the wards, e.g. a heat cradle over the thighs and lower abdomen for frequent short periods during the day to provoke reflex vasodilatation in vascular disease of the limbs and trophic ulcers.

Ultra-Violet Light

Generalized Used in the treatment of psoriasis. Daily for three or four weeks in increasing doses. General, or upper body and face exposures are given in acne. It is occasionally used in pityriasis rosea, and mild seborrhoeic dermatitis, to speed resolution.

Local Used for indolent ulcers, occasionally for pressure sores, hypostatic ulcers or moist infective lesions. (Of limited value.)

CONTRA-INDICATIONS

Active tuberculosis, diabetes, acute eczematous or erythematous states. Psoriatics with non-pigmenting skins do not do well on ultra-violet light.

Note on diagnostic ultra-violet light Where a variety of filters are available, or where different types of ultra-violet light apparatus are in use, a patient who is light-sensitive may be tested out with different ranges of ultra-violet light. For this purpose a sheet with several small holes in it is placed over the back and a patch-test of varying strengths and ranges of light may be given to the skin beneath. To be of any real use the technique must be specialized and carried out carefully and under skilled supervision.

Short-wave Therapy

Almost a specific treatment for hidradenitis suppurativa ('boils

of the axilla'). It is also useful for carbuncles, indolent infective ulcers and granulomata.

Infra-red Therapy

Of little value in dermatology

Galvanism and Faradism

Of some value in stimulating atrophic musculature, particularly in the legs of patients with longstanding hypostatic ulceration. Used as adjunct to general remedial methods.

Massage

Of specific value in removing oedema and adhesions and in softening areas of sclerosis around hypostatic ulcers.

Generalized massage combined with suggestion and training in relaxation reduce muscular tension in cases of neurodermatitis. The technique of muscular relaxation can best be taught by a physiotherapist who has made a special study of it.

Exercises

Of particular value in hypostatic ulceration, where muscles of the affected leg are atrophic and the patient has developed a limp, stumping walk and other bad postural habits. Heel-raising exercises, properly carried out under instruction by the patients themselves, are more valuable than a variety of active movements carried out in bed. Buerger's exercises, elevation and other such manœuvres have a useful place in conditions associated with vascular inadequacy in the lower limbs.

RADIOTHERAPY

Radiotherapy is used in dermatology for the following conditions

Malignant diseases of the skin—epitheliomas rodent ulcers, leukaemic deposits and reticuloses. The treatment may be given daily or at longer intervals over ten to fourteen days. After the large doses that are often given for these conditions a moist reaction will occur which takes some weeks to heal. The patient will have been warned of this by the radiotherapist and probably have been given an ointment to apply until it subsides.

Keloids, hypertrophic growths and other non-malignant tumours. These are treated with a much lower total dose on one, two or more occasions. The reaction will not be so intense, if present at all, and no nursing problems are involved.

Eczema, lichen planus, neurodermatitis and other superficial conditions of the skin. One or more areas of the body may be treated together The doses are given weekly or fortnightly No perceptible change occurs for the first week or two, especially on the lower doses, but a diminution of itching, a reduction in inflammation and an improvement in the rate of healing can be expected during the course of treatment. The patient should be told to avoid

- all ointments during the day prior to radiotherapy·
- all strong ointments that might cause an inflammatory reaction during the course of treatment, unless, of course, under specific instruction.

The nature of the treatment should be explained to him.

Epilation of ringworm of the scalp and chronic sycosis of the beard. In these cases the treatment is carried out at a radiotherapeutic centre, since the dose of X-ray therapy must be exactly determined without overlapping of any treated areas. The dose which causes the hair to fall out is only narrowly separated from that which causes irreversible damage and failure of the hair to grow normally again But with standard techniques and careful administration it is a safe method of treatment.

EFFECTS OF RADIOTHERAPY

The reason for the success of X-ray therapy in all these conditions is not fully understood, but it has a particularly lethal effect on young and undifferentiated cells. This is made use of in the treatment of malignant growths. The alleviation of pruritus and inflammation is probably due to its action on cell enzyme systems.

Apart from the general malaise that occurs when large areas are treated with deep radiotherapy the effects are limited to the area of skin treated (but see below). Some patients will complain of bizarre symptoms affecting their whole body and attribute this to the X-ray therapy treatment, but they can always be assured that this is not so.

A fractional dose, such as is given for common inflammatory diseases of the skin, gives rise to no visible effect at all or at most, a mild erythema which quickly passes off In larger doses a reaction occurs a week or ten days later When given in the treatment of malignant conditions, this reaction may be considerable, leading to burning, exudation and marked erythema of the skin. This heals up entirely in the course of the subsequent two or three weeks. A single

of the axilla') It is also useful for carbuncles, indolent infective ulcers and granulomata.

Infra-red Therapy

Of little value in dermatology

Galvanism and Faradism

Of some value in stimulating atrophic musculature particularly in the legs of patients with longstanding hypostatic ulceration. Used as adjunct to general remedial methods.

Massage

Of specific value in removing oedema and adhesions and in softening areas of sclerosis around hypostatic ulcers.

Generalized massage combined with suggestion and training in relaxation reduce muscular tension in cases of neurodermatitis. The technique of muscular relaxation can best be taught by a physiotherapist who has made a special study of it.

Exercises

Of particular value in hypostatic ulceration, where muscles of the affected leg are atrophic and the patient has developed a limp, stumping walk and other bad postural habits. Heel raising exercises, properly carried out under instruction by the patients themselves, are more valuable than a variety of active movements carried out in bed. Buerger's exercises, elevation and other such manœuvres have a useful place in conditions associated with vascular inadequacy in the lower limbs.

RADIOTHERAPY

Radiotherapy is used in dermatology for the following conditions

Malignant diseases of the skin—epitheliomas, rodent ulcers, leukaemic deposits and reticuloses. The treatment may be given daily or at longer intervals over ten to fourteen days. After the large doses that are often given for these conditions a moist reaction will occur which takes some weeks to heal. The patient will have been warned of this by the radiotherapist and probably have been given an ointment to apply until it subsides.

Keloids, hypertrophic growths and other non-malignant tumours. These are treated with a much lower total dose on one, two or more occasions. The reaction will not be so intense if present at all, and no nursing problems are involved.

Eczema, lichen planus, neurodermatitis and other superficial conditions of the skin. One or more areas of the body may be treated together. The doses are given weekly or fortnightly. No perceptible change occurs for the first week or two, especially on the lower doses, but a diminution of itching, a reduction in inflammation and an improvement in the rate of healing can be expected during the course of treatment. The patient should be told to avoid

all ointments during the day prior to radiotherapy

all strong ointments that might cause an inflammatory reaction during the course of treatment, unless, of course, under specific instruction.

The nature of the treatment should be explained to him.

Epilation of ringworm of the scalp and chronic sycosis of the beard. In these cases the treatment is carried out at a radiotherapeutic centre, since the dose of X-ray therapy must be exactly determined without overlapping of any treated areas. The dose which causes the hair to fall out is only narrowly separated from that which causes irreversible damage and failure of the hair to grow normally again. But with standard techniques and careful administration it is a safe method of treatment.

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dose in excess of 3000 r of penetrating type of X ray leads to long-delayed, irreversible skin changes with atrophy scarring, pigmentation and telangiectases—radiodermatitis.

Radiodermatitis

The occurrence of this, except as an unavoidable result of the treatment of malignant conditions, is a major disaster Epitheliomata frequently develop in such an area. Any patient who has an X ray therapy should be warned that he should not have any further doses elsewhere without informing the radiotherapist (or dermatologist) of his previous course In this way the danger of accidental overdose will be avoided.

Long-term effects

Although we are chiefly dealing, in dermatology with small fractional doses, there is a general belief that no minimum threshold dose exists as far as long-term effects are concerned. Once a cell has been irradiated, it is never the same again sums up the present view The potential dangers of radiotherapy are well-understood by dermatologists in this country and as a treatment for non malignant conditions it is being used less and less. But there remains a very real place for its use, given carefully and with certain precautions.

PART THREE

THE MANAGEMENT OF CERTAIN COMMON DISEASES

NOTE. These short chapters deal with specific problems of management and not with accounts of the diseases themselves or with diagnosis. But a condensed, and necessarily rather dogmatic, description of the disease is given at the beginning. This is needed to avoid confusion over the definitions and terms used.

Given a patient's diagnosis, a nurse will be able to learn from this section of the book certain techniques of treatment appropriate to each disease and to understand the reason for these.

For fuller descriptions of the diseases included here the reader is referred to standard text books. A list of these is given in the appendix.

CHAPTER 14

Infective Conditions Impetigo Boils

IMPETIGO

Definition

A staphylococcal or streptococcal infection of the skin, giving rise to small pustules quickly becoming scabbed (streptococcal) or to larger blisters (staphylococcal). It is most commonly seen in children and young adults. The condition is contagious, epidemics of the superficial bullous type occurring in families, institutions and schools.

Although it is usually a primary infection, impetigo may occur as a complication of other conditions, particularly scabies, papular urticaria and pediculosis capitis. The presence of impetigo in areas other than the face should lead to a search for scabies.

In the primary form it usually occurs on the face as a small red spot. This rapidly develops into a blister and then a pustule, which bursts to form an adherent, itchy yellowish scab or crust. This is followed by the appearance of other lesions nearby In young men it is common in the beard area and is spread by shaving. It may complicate eczematous lesions, particularly following trauma from combing or scratching the scalp

General Treatment

The aim of treatment is to overcome the local infection. Any other pyococcal disease that is present—blepharitis and styes boils in the nostrils or cracks behind the ears—should receive attention. When such infection is extensive or persistent, or where there are septic tonsils or recurrent respiratory disease, a full enquiry should be made into the health, habits and home conditions of the child.

General treatment follows from this. A holiday ultra violet light, earlier bedtime or specialist attention may be needed.

Local Treatment

This must be carried out thoroughly The scabs which form over the site of infection should be removed before any antiseptic is

applied. When these are few this can be done by soaking in warm oil or emulsifying ointment. When they are numerous, a boric and starch poultice is applied (see Part 5 page 214) This is left in place for some hours. The scabs and crusts soften and are wiped off with the poultices. The underlying lesions are treated twice daily with an antibiotic ointment such as neomycin or Graneoidin. If the crusts are excessive, boric and starch poultices can be repeated. Antibiotic treatment should not be continued for more than a week. Most cases will have cleared completely by then. Tyrothricin and sofra mycin lotions are also safe and effective, as well as being less messy Penicillin or chloromycetin cream should *not* be used. The colour is an objection to the use of the dyes, such as gentian violet (1 per cent in spirit 70 per cent), which otherwise are excellent, drying up the lesions very quickly

Complications occur through the over zealous application of complex or sensitizing ointments, leading to a secondary eczema. The course of this runs into weeks rather than days and leaves the skin damaged for a considerable time. Local treatment should therefore be simple.

Where the impetigo is secondary to lice or scabies, this underlying condition must be treated first, regardless of the impetigo. The converse holds true when the impetigo is secondary to eczematous conditions, but here there are safe therapeutic combinations which deal with both conditions at once, e.g. gentian violet in zinc cream, neomycin with hydrocortisone.

In severe generalized impetigo there is some constitutional upset, enlargement of the lymph glands, fever and malaise. These cases justify the parenteral exhibition of antibiotics. At the time of writing, between one-third and one-half of all staphylococci encountered in hospital practice are resistant to penicillin, which is not, therefore, a suitable antibiotic for use in skin patients.

Isolation

Home Reasonable precautions against cross-infection via towels, close contact, brushes, combs, etc. These should be rigorous if there is a baby in the house.

Institutions Do not disrupt normal life. Isolate severe cases until scabs are cleared off and local applications applied. Strict precautions about towels.

Hospital. More stringent precautions in children's wards and especially in maternity units, where patients must be isolated

immediately and the source of infection sought. (This is usually a staphylococcal carrier other than the parent.)

BOILS

Boils result from inflammation of hair follicles due to invasion by the staphylococcus aureus. They arise singly or in crops. Recurrent attacks may occur over a number of years. Boils are more frequent in the following conditions

1 Where the patient has a seborrhoeic skin with an accompanying vulnerability to superficial staphylococcal infections.
2 When certain skins come into contact with oils and greases. (A form of industrial dermatitis affecting thighs and forearms.)
3 Where the patients become carriers of a foreign or virulent strain of staphylococci in the nostrils perhaps accentuated by the presence of cracks and fissures. Epidemics of boils start in this way
4 As a complication of scratching, when staphylococci are spread over the body by finger-nails and introduced into an excoriated skin, e.g. in pediculosis, scabies and papular urticaria.

Boils do not represent a simple infection by a foreign organism. Though an overwhelming invasion from an outside source may be responsible, many outbreaks of boils follow lowered resistance of the skin to its own staphylococci. This personal, and so far incalculable, factor of resistance is probably of great importance. Recurrent attacks of boils seem in some cases to be associated with periods of stress. Treatment here lies, not in a course of antibiotics, but in a thorough examination of the life and habits of the patient concerned.

Management

Examine the patient for any of the associations mentioned. Test the urine for sugar Make sure that the nails are cut short and well scrubbed.

Treatment is directed to reducing the staphylococcal carrier-state of the anterior nostrils and in improving the patient's general health.

Boils should never be squeezed, particularly those on the face. In the early stages an Elastoplast dressing prevents spread. Local dry heat and immobilization are the best local remedies for large boils and carbuncles. Antibiotic ointments are used successfully in the very early and the late stages of boils. In severe cases, or in carbuncles, parenteral antibiotics are indicated (but the staphylococcus is often penicillin-resistant).

General Treatment

None of the many forms of specific treatment advocated in the past has any particular value, though fresh yeast is still believed by some to be of benefit. Ultra violet light has a temporary bactericidal effect. Vaccines and toxoids are of doubtful value. A holiday period of rest, change of working conditions or relief of tension in the home often bring about a cure. A logical measure to combat the nasal carrier-state is to apply cetrimide (Cetavlon) or an antibiotic such as neomycin or soframycin up the anterior nares for ten days.

Axillary boils are usually the result of a staphylococcal infection of special sweat-glands present in the axillae. Small boils on the back resembling severe acne, and pustular lesions elsewhere, may be the result of bromide or iodide ingestion. Boils on the back of the neck may result from friction from an oily or greasy collar or brilliantine. Boils on the face usually arise from acne or rosacea. Boils in the genital area follow scratching from pediculosis, scabies or neurodermatitis.

As a brief guide

The *district nurse* should search for domestic hygenic faults.

The *institutional nurse* should search for carriers, even herself in any epidemic.

The *factory nurse* should watch for cases of industrial folliculitis, sometimes only requiring improvement in measures of personal hygiene.

The *hospital nurse* should check all other aspects of the patient's health and should consider cross-infection.

All nurses should test the patient's urine and search for signs of other skin disease

Note Antibiotics that can be given by mouth should in general be avoided on the skin. Their indiscriminate use has helped to create the present high incidence of infections caused by resistant strains of staphylococcus aureus.

CHAPTER 15

Seborrhoea and Acne

SEBORRHOEA AND SEBORRHOEIC DERMATITIS

Definition

This is, strictly speaking, an increased flow of sebum In actual practice the conditions labelled seborrhoeic embrace a diversity of conditions, some of which are in no way related to seborrhoea. As explained previously certain skins appear to be rich in sebaceous glands, or have glands in which the flow of sebum is increased and altered in form. Patients with this type of skin have dandruff and prominent pores, a muddy complexion, a tendency to blepharitis, wax in the ears and acne in adolescence. True seborrhoeic eruptions occur predominantly in areas where there are abundant sebaceous glands—the scalp, face and ears and the midline of the chest and back.

Varieties

There may be *excessive dandruff* with folliculitis, scabs and crusts in the scalp

Another variety is an eruption of *scaly dermatitis* round the hair margin and behind the ears an irritable red scaling of the skin on the sides of the nose and the corners of the eyes

There may be an eruption of *discoid and petaloid patches* round or oval, scaly and irritating commonly in the centre of the chest or back, sometimes in the groins and axillae, and elsewhere on the trunk and limbs. This is perhaps the only true form of seborrhoeic dermatitis

Associated Conditions

Infective eczematoid dermatitis consists of cracks, infection and exudative eczema behind the ears, in the corners of the eyes and mouth, the anal cleft, and the folds of the body generally Most authors separate this from seborrhoeic dermatitis, though the conditions may occur together

There are the so-called *seborrhoides* affecting different parts of the body in different forms. These are frequently eczematous in

character While they are claimed to be seborrhoeic in origin, their exact relationship is uncertain.

Course, Prognosis

The majority of petaloid and seborrhoide eruptions settle in six to eight weeks. In the other types, persistence and recurrence are frequent. It is difficult to alter the nature of the seborrhoeic skin, and, even if dandruff is eliminated temporarily it will return when the treatment is suspended. This does not apply to some types of intertrigo occurring in seborrhoeic skins where adjuvant factors are partly responsible and can be eliminated. The prognosis is further complicated by the ease with which secondary infections occur

Management and Treatment

One has to consider

1 Treatment of the scaly patches.
2. Dandruff and its extensions.
3 Eczematoid dermatitis and intertrigo
4 The ide eruptions.

Treatment in this last group is with bland and soothing lotions. That of dandruff is discussed under Care of the Seborrhoeic Scalp (page 186). Treatment of the dry patches is based on the avoidance of wool next to the skin and reducing sweating and friction. Moderate exposure to the sun or ultra-violet light is helpful. Zinc paste with ichthyol, calamine lotion with sulphur or salicylic acid and sulphur ointments are used. Soap should be avoided in all but simple uncomplicated seborrhoeic states. X-ray therapy is helpful to resistant patches.

The Management of Chronic and Relapsing Cases

In many instances, particularly in chronic infective eczematoid dermatitis, there are indications of psychological upsets and environmental difficulties. Outbreaks quite commonly follow psychological traumata, or may occur after a long period of stress. Recurrent attacks are often seen in patients with inadequate personalities who are depressed, resentful or anxious. The continued relapses and the difficulties of temperament make the treatment of these patients particularly tedious. They clear up slowly in hospital, only to break down on return home. Antibiotics, sedation and rest form the basis of therapy Vitamin B complex in high doses, intravenous T.A.B. or steroid administration are often needed. Hospital treatment should be followed by convalescence.

INTERTRIGO

Though not necessarily a manifestation of the seborrhoeic state, intertrigo may for convenience be considered here. The name is given to an infective dermatitis affecting the folds of the body particularly the groins breasts and peri-anal areas. Treatment consists of soothing the inflamed skin and controlling the secondary infection that is usually present. The two most valuable local agents in the acute stage are a bland application, such as zinc cream and gentian violet ½ per cent, or an antibiotic such as neomycin. Rest is essential and the patient should be in bed The folds must be separated by doubled linen strips and adjustment of the clothing (Plate XX) Wet permanganate dressings (see Appendix) are often useful for the first thirty-six or forty-eight hours as a means of drying up the initial stage. Subsequent stages will respond to zinc and ichthyol in pastes or creams. Soap and water are prohibited until the intertrigo is completely cleared. The obese patient should be on a low carbohydrate diet. Recurrences are likely unless great care is taken to avoid chafing, sweating and maceration of the skin.

In some cases the intertrigo is due to a yeast infection. Scrapings from the edge of the area—or even a swab—will reveal the presence of Candida albicans and the condition will respond best to gentian violet, brilliant green or one of the newer specific agents against yeast infection such as Nystatin or Dequadin. A glucose-tolerance test should always be carried out on these patients, who are sometimes mild diabetics.

ACNE

Definition

A condition brought about by blockage and inflammation of the follicular and sebaceous apparatus of the face, chest and back. It mainly affects adolescents. (Plates V and VI.)

Natural History

The first signs of acne sometimes appear at the age of eight or nine, with blackhead formation and little papules on an increasingly greasy skin. It may erupt suddenly at the onset of puberty or not occur until a period of rapid bodily growth takes place, at fifteen or sixteen. Milder forms clear up by the time the patient is twenty but severe cases persist into the thirties, especially in men. It is more common in those with markedly seborrhoeic skins rare in negroes and in hot countries (except humid ones).

Causes

Inherited type of skin and sebaceous apparatus Acne, seborrhoeic dermatitis or dandruff and greasy skin have frequently occurred in the parents.

Glandular changes occurring in adolescence.

(a) *Sex glands*. Probable relative overactivity of testosterone in male and progesterone in female (or increased sensitivity to these). It is known that these glands cause an increase in the size and activity of the sebaceous glands.

(b) *Adrenal gland*. Tension, stress, emotional or mental over stimulation and fatigue play some part by the effect on the adrenal cortical secretions, which also control the sebaceous activity

Lack of soap and water causing accumulation of grease and dirt.

Dandruff—often an accompaniment of acne of the forehead.

Chocolates and the fat of the pig appear to worsen acne in some patients.

Picking and squeezing of acne spots by the patient causes scarring or the rupture of the sebaceous gland with secondary inflammation.

Bromides and iodides These drugs can produce an acneiform eruption or intensify a pre-existing acne.

The Management of Acne

First, never tell a patient with acne that nothing can be done about it This is cruel as well as untrue. These young people, at a very sensitive period of their lives, have an extra burden to bear in the form of a crop of disfiguring spots. Though this may seem a trivial enough complaint to the doctor or nurse, it looms large in the patient s imagination, makes him self-conscious and shy and severely restricts his enjoyment of life. It is, in fact, a much more serious disease than an attack of tonsillitis or influenza, because of these attendant psychological effects.

For All Cases of Acne

1 Spend some time with the patient, explaining the mechanism of acne and the reason for it. Be quietly and firmly optimistic. Do not promise to cure the patient in six months do not fail to promise considerable improvement eventually

2. Encourage the use of plenty of soap and water

3 Advise against eating chocolates, bacon and fat pork if this seems to make the acne worse. (Let the patient test this.)

4 Make sure he has plenty of rest, exercise and sleep. Curtail long periods of late night study (acne is usually worse at examination times) Encourage holidays relaxing in the sun. Home ultra-violet light is of very limited use but natural sun is most helpful.

5 Encourage the regular careful removal of blackheads with a blackhead expressor (comedo extractor) each day (see Fig. 6) On no account should the patient stand mirror-gazing and picking the spots. This becomes an obsession and can severely damage the skin, leaving scars that would otherwise not occur

6. Local treatment varies but usually consists of peeling lotions and pastes. The strength of these must be adjusted to the individual patient's type of skin Erythema, some slight soreness and peeling should occur within a week. If it ceases to do so, the strength of the



Fig. 6. A comedo expressor

application is progressively increased. Greasy ointments are best avoided, but emulsified bases are useful and preferred by the patient. Most preparations contain salicylic acid and sulphur which in some combination or other form the basis of local treatment.

7 A number of more specialized forms of treatment are used where these measures fail or need supplementing. Ultra-violet light is simple and safe and, in those who pigment well, can be given in a sufficient strength to bring about peeling and considerable improvement. In others, it is not as effective.

Oestrogens are frequently used and, in some hands, appear to be of considerable value sulphapyridine retains a reputation for improving cystic acne, a very resistant form.

The weekly application of CO_2 slush or solid snow helps to clear residual lesions and flatten cystic ones. (See Section V page 229)

X-ray therapy is very useful in suppressing sebaceous secretion for some months. It should not be given to young patients, but preferably when the acne is past its peak.

Special Types of Acne

Pustular May need initial treatment for a week with antibiotic lotions.

may not affect the fingers as much as areas where thes ner in boys. i.e. the face, neck or chest. Such examples can be m atient manage-

Sensitivity reactions should always be suspected ilized. Oestrogens is symmetrical or of curious or bizarre distribu cularly useful in this feet and the palms of the hand are protect layer eruptions due to contact here show ally forms of prurigo in the palmar or plantar aspects. ith little or no true acne.

Sensitization can occur at any tim the offending agents in the past drug eruption due to bromides and lo... and since ... *gidata* are uncommon types that need not be considered here.

Scarring in acne occurs in the pustular and cystic varieties, in halogen acne and when the spots are picked and squeezed repeatedly The scars always improve greatly with time and quite bad scars will often become insignificant. One is therefore always able to reassure the patient. Some help can be given to badly scarred areas on the face by abrasive therapy or plastic surgery Milder degrees of scarring improve with CO_2 snow repeated several times.

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Acute Co

Definition

Acute contact dermatitis is inflammation of the skin of eczematous or other type due to irritant or sensitizing agents. This is likely to be met in the following situations

- *by the factory nurse as an occupational hazard*
- by the district nurse in everyday home practice
- by the hospital nurse in the treatment of cases admitted to the ward

Characteristics

The eruption appears suddenly and is subject to irregular exacerbations If the patient remains in contact with the responsible agent, attacks may be continuous If contact is intermittent, the attacks will be discontinuous and may even occur at very long intervals apart.

The pattern of the eruption is often specific. In most industrial cases the exposed parts are affected (the hands and face in resin or glue sensitivity or the hands alone in oil or soda dermatitis) In nickel dermatitis the suspender area of the thighs is affected, as well as that part of the body in contact with nickel in fasteners, books and eyes, and jewellery clasps (see Fig. 5 page 42) In contact dermatitis due to flowers, perfumes, powders, dusts and other *volatile agents in general, the face and neck will be most affected,* the hands less so unless the patient has actually been touching the offending flower or substance. In chrome sensitivity in cement workers, all areas where the dust settles show an eruption. Differences in male and female dress are reflected in the distribution of contact dermatitis due to clothing dyes and irritants—the purpuric khaki shirt dermatitis of men, the nylon stocking dermatitis of women. Some patterns are characteristic an acute eczema of the lips is usually due to lipstick hair-dye dermatitis affects the loose tissues of the eyes and face, as well as the scalp nail-varnish sensitivity

may not affect the fingers as much as areas where these have rested, i.e. the face, neck or chest. Such examples can be multiplied.

Sensitivity reactions should always be suspected when an eruption is symmetrical or of curious or bizarre distribution. The soles of the feet and the palms of the hand are protected by their thick horny layer- eruptions due to contact here show on the dorsal rather than the palmar or plantar aspects.

Sensitization can occur at any time despite prolonged handling of the offending agents in the past. This is difficult for most patients to understand, and since their co-operation and observation may be needed for diagnosis, this point must be made clear It should be emphasized that a violent contact dermatitis may occur in one individual from sudden sensitization to something that is normally quite harmless, such as an article of clothing, a dye or polish, or a cosmetic that has earned general approval.

Procedure of Investigation

1 Question the patient closely about his activities before the onset of the eruption. Point your questions particularly to any departure from normal life or habits, any unusual materials handled, any visits to unaccustomed places. Enquire about occasional gardening, painting in the house, cosmetic procedures, hobbies, pets, holidays, and new cleaning or polishing agents.

2. If the cause is not obvious, try to limit the field as far as possible by seeing if a patch-test of some of the most likely agents produces a positive result.

3 Allow the eruption to settle down and let the patient resume his normal life, telling him to remember carefully each evening everything that has been done during the day and if necessary to keep a diary of it. If another eruption occurs, the answer may become apparent. If the patient is not able to do this, cross-questioning again on the second or third attack may show that these occur at the week-end, on holiday following a visit to a relative, or at certain periodic times that give a clue to its cause. For example, one woman sustained a contact dermatitis due to an anti-mate solution each time her bitch came on heat. Another patient developed primula sensitivity only when visiting her friend who kept them in a room. A dustman developed a chrysanthemum sensitivity once a fortnight when his rounds included the local nursery These examples will show how difficult it may be to discover the offending agent.

Management

1 Remove the patient from the cause, or from all likely causes, if this has not been established. Observation in bed or even away from home may be necessary

2. Once this is done, the eruption will settle down naturally Bland creams and lotions are applied. Wet dressings are particularly useful for the acute stages. Hydrocortisone ointment may be used if the cause has been discovered otherwise its suppressive effect will make it more difficult to find this. If the patient is agitated and restless, sedation may be needed. Some substances sensitize the patient to light he will then continue to develop the rash on his face, neck and hands after exposure to light, without any further exposure to the specific agent. (See Chapter 37 page 190)

3 When the eruption has settled down (a process normally taking three or four weeks) the patient can return to normal activities. If the cause has been found, he should be removed from further contact with it. If not, he should be told what have seemed to be the most likely causes and asked to notice carefully what activities coincide with a return of irritation.

Do not attempt to apply proprietary anti-pruritics and analgesics to the skin of a patient with acute contact dermatitis the condition is not infectious and antibiotics or other complicated preparations are not needed. The more acute the eruption, the milder should be your applications. In general, patients believe the reverse and may do considerable damage to their skin before medical help is sought, by applying strong agents to drive out the poison kill the infection or suppress the itching.

CHAPTER 17

Special Forms of Contact Dermatitis

HOUSEWIFE'S DERMATITIS

The District Nurse is frequently called upon to help and advise the housewife with eczematous dermatitis of the hands due to common household irritants. A successful outcome depends less on what is applied than on the co-operation of the housewife in avoiding the cause. Advice should be on the following lines

1 A gradual improvement will occur if she is prepared to take decisive measures and keep to these. Even so, the skin will take several weeks to recover

2. The dermatitis is not due to dirt or infection but to the continued action of alkalis, the macerating effect of hot water and the frequent changes of temperature to which her hands are subjected in cooking and washing

3 She must plan her daily routine so as to break up periods of wet work and give her hands time to recover Frequent short periods of washing are better than a whole morning's washing once a week.

4 Wherever possible, she should make use of labour-saving devices such as washing machines or commercial launderette services. It may be possible to share a neighbour's machine. If she has repeated attacks, the initial expense of buying one must be weighed against the likelihood of a permanent breakdown of her skin.

5 She should obtain thin cotton or linen gloves, for night and day use. These should be worn the whole time she is doing housework. They serve as a reminder not to allow her hands to come into direct contact with polishes, disinfectants, detergents and cleansers.

6. Rubber or plastic gloves must be loose and many sizes larger than she would normally take. They should not be worn in the acute stage of a dermatitis and for a maximum of twenty minutes at any one time. Cotton gloves are worn underneath. These gloves are kept on the sink and in the bathroom and worn while washing up, bathing, cleansing sinks and basins.

non-industrial cause is likely to feel these matters even more deeply since he associates disease of the skin with external contacts, and external contacts as being synonymous with working hazards. He may well feel aggrieved, either at the doctor's diagnosis or at his own fate

The Worker with Industrial Dermatitis in Hospital

(*a*) An otherwise active and healthy man kept in bed under ordinary ward conditions deteriorates mentally physically and morally and may leave hospital with his skin better and the rest of of him very much worse. He should be encouraged, as far as possible, to take an active part in the life of the ward, helping in the meal-round and so on, and his time should be occupied by intelligent occupational therapy either of his own choice, or organized by the therapist.

(*b*) As soon as he is fit to do any work he should be discharged back to a suitable job in the same factory until his skin has completely recovered. Where this is not possible, the District Rehabilitation Officer (D.R.O.) is often able to help.

It is doing no service to a worker to give him the benefit of the doubt by diagnosing an industrial dermatitis and keeping him off work indefinitely The economic results of this are often forgotten. The problem of industrial dermatitis is very often the problem of constitutional eczema of the skin the work—if it plays any part at all—acts only as a precipitating agent in a chain of events that might have arisen in any case

The Recovered Worker back at Work

After any severe attack of industrial dermatitis, the worker should return to an occupation that does not involve the handling of irritants for the first two or three months, and then return to his original work. Where a particular sensitivity to some agent is involved, he should not handle that agent again for a considerable time. Where non-specific irritants such as oil, grease, caustics and solvents are responsible, precautionary measures should be insisted on, at least for the first few months. This may mean a lessening of the man's output and capabilities. But it is better for him to work shorter hours and remain at work, rather than return to full work too soon and suffer an immediate relapse.

A Note on Barrier Creams

A sensible use of suitable barrier creams, applied properly and unhurried attention to washing and cleansing methods will help

prevent relapse. But the worker must understand exactly how to use these creams, what other measures of protection he should take, and what substances he should avoid.

Many different types of barrier creams have been evolved to give protection against different substances. Obviously the correct one should be used. The manufacturing firms have very well-organized advisory services to help in this. But no barrier cream can be looked on as anything more than a second line of defence

CHAPTER 18

The Management of Infantile Eczema

Three types of eczema affect infants. They are as follows

Infective Eczematoid Dermatitis ('Seborrhoeic Eczema')

Red, crusted, weeping areas affecting the folds of the body ears, scalp, groins and buttocks. It occurs more commonly in rather fat infants with fair skins. Maceration from sweating and alkalis, thick woollen underwear friction and chafing cause the condition to spread An excess of carbohydrate in the feeds may have some influence in reducing the resistance of the skin to infection.

MANAGEMENT

Avoid wool and tight clothes that cause friction. Use nut oil rather than soap for cleaning. Clear any crusts from the scalp by gentle persistent treatment (see Chapter 7 page 59). Cover affected areas with rag or linen. Use zinc cream 2 parts and ammoniated mercury 1 part, or neomycin ointment for infected areas, zinc cream alone for others. If the baby is overweight, slightly reduce the amount of sugar added to the feeds and change to mixed feeding as soon as practicable.

Napkin Eruption

This is included here for convenience It is an inflammation of the napkin area by friction, dampness, alkalis and infection. It is not eczematous.

MANAGEMENT

Leave off the nappies for as long as possible in the twenty-four hours. Let the baby kick freely on towelling, tow or cotton wool. Change this whenever it is soiled. If nappies have to be worn, use Harrington squares next to the skin.

Do not use rubber or plastic knickers.

Do not wash nappies in detergents or household antiseptics but use soap-flakes or soap-powder rinsing very well afterwards. Boric acid dusting powders should not be used while the dermatitis is

active. The unaffected parts of the baby's skin may be sponged lightly with soap and water but not the affected parts. Apply a soothing cream. Standard barrier creams are of some value in mild cases that are responding to treatment and as a prophylactic measure if the baby has an ammoniacal urine or diarrhoea. They should not be used in acute or extensive napkin eruptions

Contact Dermatitis

There is a contact dermatitis caused by sensitivity to particular articles with which one part of the skin comes into contact. This has already been discussed. Though an uncommon cause of dermatitis in babies, it may occur from plastic toys or pots dyes in clothing and toys and, of course, applications used on the skin. The area affected is usually the key to discovering the cause.

Infantile Eczema (Atopic Dermatitis)

This is the commonest and most persistent type of eczema seen in infancy It usually begins about the third month and starts on the face or scalp. This eczema is inherited and is associated in families, or in the same individual, with asthma and hay fever Urticaria and migraine also occur

The skin exhibits a heightened irritability which is sometimes reflected in the personality of the baby who is fractious, difficult and highly strung His management demands the utmost patience and control on the part of the doctors, nurses and parents.

It must be explained to the parents that there is no known treatment which will bring about an immediate cure. The eczema will almost certainly last for many months, but eventually declines and may completely disappear Even if it does not do so it is likely to be restricted to certain areas and to appear only from time to time.

Although we do not know all the factors that cause this eczema or control its course, we do know that a quiet, stable, affectionate background will help the child at all stages of the disease. The parents are going to be faced with the management of this problem for a considerable time and they must establish at the outset a mutually agreed and concerted plan of upbringing. Differences over this, tension between the parents or between the mother and child, and the interference of grandparents, must all be avoided. At times the mother may become exhausted with sleepless nights as her irritability increases, the child's emotional control becomes less. It is then that a short period of hospital treatment is helpful. Calm, unhurried nursing, sedation and splinting will quickly bring relief

to the child and hope to the mother But such hospital treatment should not be undertaken lightly Babies over nine months old feel the absence of their mother very strongly and on return home develop behaviour disorders which create further difficulty in management. If possible, admit the mother as well—and sedate both. Sedation of the mother when the eczema is particularly troublesome is in any case helpful and often results in an immediate improvement in the child.

It is not generally believed that food sensitivities play any part in this type of eczema. But many affected infants show sensitivity to, or a dislike of eggs, fish, and orange-juice. This sensitivity is lost at a later age. Feeding should otherwise be normal. Exacerbation of the eczema always occurs at times of teething.

These children should not be vaccinated but may have other inoculations, preferably when the eczema is in a quiet phase. Infantile eczema improves (temporarily) with an attack of measles, but does not materially change with the other exanthemata.

DETAILS OF MANAGEMENT

Tar lotions and pastes are probably still the best remedy except in the acute stages, when bland creams are indicated. Hydrocortisone is of great help, particularly on the face, but relapses seem to occur more quickly than after tar Coltapaste bandages are very useful.

Splinting (see pages 57 and 217–8) This prevents the spasms of scratching that lead to further irritation. If combined with sedation, babies become accustomed to it very easily and seem to find it a comfort.

Sedation is especially useful in acute attacks. Relatively large doses are needed. Chlorpromazine 10–20 mg. is useful for young children. Antihistamines are of little value.

Clothing should be cool. Avoid wool next to the skin. Pyjama sleeves can be sewn to form loose bags over the hands. Clothing should be changed in a warm room, avoiding abrupt changes of temperature.

Soap is best used in moderation or replaced by oil, emulsifying ointment or sodium lauryl sulphate. Baths should be warm but not hot and are probably best restricted to one or two a week.

Spasms of scratching are distressing to the mother who should try to distract the child's attention rather than forcibly prevent him from scratching.

Above all, see that he has a quiet, firm background. Too much fussing is worse than too much neglect. As the baby grows older he will demand more and more of his mother's time and emotions. He will play up his eczema to gain this, and a situation of aggression, irritability and intolerance is very easily built up.

CHAPTER 19

Psoriasis

Psoriasis is an inherited disease in which the skin is predisposed to react to trauma, infection and stress with the production of well-defined dull pink thick lesions, showing a silvery scaling. The elbows, knees and scalp are most often affected, but no area of the skin is exempt. (See Plates VIII and IX.)

Internal remedies are of little use in treatment, though any regime that brings about an abrupt change in the body may be beneficial. Diets of all kinds, modified shock treatment and a variety of specific agents have been used with occasional success. Treatment based on eliminating or modifying the various precipitating causes is a matter of common sense. Rest in bed is perhaps the most useful. It is always called for in generalized exfoliative psoriasis and flexural psoriasis.

The management of psoriasis is based on faith, patience and frequent reassurance. The physician who is the enthusiast best controls the disease. Constant supervision is called for and the nurse must be embued with the same enthusiasm. It is obvious that the best results are obtained when patients can be treated in a special centre with a trained staff where the reputation of success stimulates the faith of the patient while it emboldens his therapist. If there are adequate facilities for a full daily treatment most patients can be cleared of psoriasis (albeit temporarily) in three weeks. (See Part IV page 202.)

Where such facilities do not exist, the same result is obtained from a three week hospital stay. These remarks do not apply to acute generalized or pustular psoriasis.

Variations in the Management of Different Types

GENERALIZED EXFOLIATIVE (rare)

Rest in bed and perhaps corticosteroids, at the dermatologist's discretion.

FLEXURAL PSORIASIS.

Rest in bed to avoid chafing, sweating and maceration. Tar and salicylic acid pastes. Dithranol used cautiously

GUTTATE PSORIASIS

Occurs chiefly in children and young adults. Often resolves with little or no treatment. Elimination of infection, change of environment, care of general health. Tar baths (see below) and sunlight. Avoid the generalized application of ointment.

THE AVERAGE CASE OF PSORIASIS

Intensive treatment with dithranol, tar combined with baths and ultra-violet light. It is here that attention to detail separates success from failure.

TAR can be used

(a) As 2–4 oz. liq picis carb to a 30-gallon bath. Patients soak in this for fifteen minutes, removing the scales with a scrubbing-brush or nail-brush.

(b) As pure liq picis carb. painted on the affected areas after a bath.

(c) As ung. picis carb co. B P rubbed well into the lesions.

DITHRANOL 0 5% IN LASSAR'S PASTE.

This is the best local application, if properly used. After some days it gives rise to erythema and discoloration of the surrounding skin. Chrysarobin has the same effect. Both these substances stain linen.

The technique for the full dithranol treatment is given on p. 224

DANGERS, WARNINGS AND CONTRA-INDICATIONS

Acute, red, fiery extensive psoriasis should only be treated with bland applications.

Dithranol should not be used in the presence of kidney disease Pastes and tinctures are better than ointments which are rubbed in these allow absorption. The urine should be tested weekly Increase of irritation is an indication for extreme caution.

Generalized ultra violet light should not be given to patients with tuberculosis or diabetes.

Neither of the full techniques mentioned must on any account be used in cases of generalized exfoliative psoriasis or in acute spreading psoriasis.

PSORIASIS OF THE SCALP

It is difficult to apply ointments adequately unless the hair is cut short. The regular application of one of the three scalp ointments given in the formulary is combined with frequent use of a tar

shampoo If dithranol paste is applied properly it is often extremely successful, but the hair must be cropped short and a linen or tubular gauze cap worn to prevent accidental contamination of the eyes.

ARTHROPATHIC PSORIASIS

Treatment of this condition demands expert assessment.

PSORIASIS OF THE NAILS

These may be affected, even exclusively No known treatment is practicable, though the condition sometimes improves spontaneously

CHAPTER 20

Infestations Scabies Pediculosis

SCABIES

Definition

A contagious disease caused by infestation with the *Sarcoptes scabiei*. (Fig. 7 and Plate XIX.)

Description of the Parasite

The sarcoptes ('acarus') is a mite, just visible at the end of a pin, and having a specific affinity for man and the higher apes. It is closely related to a similar mite which gives rise to sarcoptic mange in dogs.

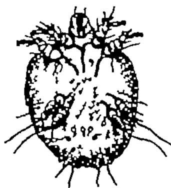


Fig. 7 An acarus.

The female mite burrows into the horny layer of the skin, without penetrating any further and lays its eggs in the burrow This burrow is one of the distinctive features of the disease. The eggs hatch out and pass through a remarkable series of moults until they are finally adult, when mating occurs and the cycle starts again. The mite has a predilection for warm folds and furrows of the skin and is transmitted by contact. As it has been shown that relatively few mites are present in the average case, the chance of transferring a pregnant female or a male and female mite is remote. In fact, infectivity is quite low except in families or in patients between whom there is prolonged bodily contact.

Development of the Disease

After a period varying from some days to some weeks (incubation period) the patient becomes sensitive (allergic) to some secretion formed by the mite (or to the mite itself) and a papular eruption results. Though a papule often occurs at the head of or just in

front of the burrow these also extend beyond the area of infestation and may represent a non-specific sensitivity-reaction pattern.

Sites Affected and Recognition of the Disease

Standard text books should be consulted for this, but it is impor tant for the nurse to familiarize herself with the picture of scabies. It is commonest amongst children, in communities where there is much close contact, and in families in a poor state of hygiene. It is common in wartime and is one of the first diseases to show a steep rise in incidence. But it may occur in patients of high social-class, when the diagnosis is missed by the unsuspicious clinician. Eighty-five per cent of cases occur from contact with an infested person in bed, where the warmth is conducive to activity of the parasite

Among mentally defective and psychiatric patients a rare form of disease called Norwegian (or crusted) scabies, is found. The patient does not develop any reaction to the presence of the mites. As these are not scratched out, a gradually increasing infestation occurs with literally hundreds of millions of mites present on the skin. These patients are often thought to have exfoliative dermatitis until an epidemic of scabies occurs in the nurses.

Appearance of the Disease

The typical picture consists of a mixture of papules, pustules, scabs, excoriations and scratch-marks, most profuse around the hands, feet, lower fold of the buttocks, genitalia in men, nipples in women, and the anterior axillary fold in both sexes. It is more profuse on the lower than on the upper half of the body for all prac tical purposes never affecting the head or face. The typical picture can be recognized from this distribution and the polymorphism. The patient must be viewed completely undressed a diagnosis should never be attempted from looking at one part of the body only Papules on the soles of the feet in children, and groups of spots between the fingers and on the wrists are particularly suspicious. The diagnostic hallmark is the burrow which can be appreciated as a little raised line in the skin (like a miniature mole-track), often terminating in a papule and most commonly found around the hands and wrists The disease is confirmed by finding the acarus on opening up one of these burrows with a needle. The mite adheres to this and is then transferred to a slide and looked at under the low power of the microscope The female of the species (which causes all the trouble) is the only one normally seen.

Treatment

The treatment is simple and almost universally effective. It should be carried out exactly according to the instructions given in Part V The following points must be remembered

OUT PATIENT TREATMENT

As unsuspected infestation may be present before it is announced by itching, the whole family should be treated at the same time. Other close contacts of the patient should be sought and also treated.

Itching often continues for some days afterwards. Benzyl ben zoate should not be applied because of this. The standard course can be repeated after a week or ten days if the disease still appears to be active. If it is not eradicated then, the patient should be referred back to the doctor (See Appendix, page 227 Instructions to Patients.)

IN-PATIENT TREATMENT

Except when arising in mental hospitals, scabies does not give rise to any particular problem of management. A patient admitted with the disease should undergo the normal standard treatment his body linen and nightwear in use until the treatment is finished may be washed separately if desired, but the normal process of cleaning and ironing is quite sufficient. Disinfestation is not needed, provided that a lapse of a few days occurs before the clothes are used again. The acarus does not survive long away from the human body

PEDICULOSIS

Definition

Infestation by lice.

Natural History and Types

There are two types of lice.

Pediculus

(a) *corporis*—body louse (b) *capitis*—head louse.

Phthirus pubis—pubic louse ('crab').

The condition is much commoner in war-time, with field or evacuation conditions, lack of hygiene, shortage of soap. All forms of louse infestation are relatively uncommon in England, and pediculosis corporis is rarely seen in peace time.

The unpleasant implications of this disease arise from the feeling of uncleanliness which any visible infestation gives rise to in the patient, because of the secondary impetigo that may follow it, and because the body louse carries typhus in countries where this disease

is endemic (but not in England) Otherwise the condition is harmless enough, and the worst effects of it arise from over-treatment.

Description of the louse The pediculus is 2–4 mm. long, translucent except for any contained blood, having three legs with claws attached and a body longer than it is broad The phthirus is squatter and broader (Plate XVII and Fig. 8)

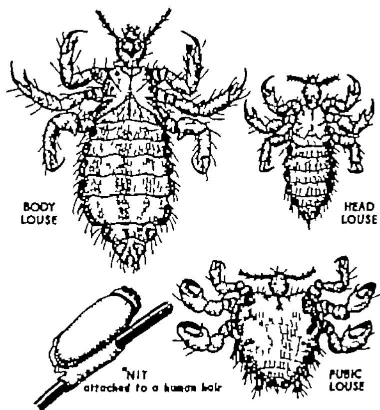


Fig. 8. Diagram showing the three varieties of lice that affect man body louse, head louse and pubic louse. A nit is also shown.

Pediculosis Corporis Body Louse Infestation

This is called Vagabond's disease because of its prevalence among tramps in the old days. With the advent of the Welfare State and the apparent nationalization of tramps, it is now rare. The classical picture is striking—a mixture of dirt, scratch marks, criss-cross excoriations, papules, scabs, and little dusky blue patches of pigmentation. This louse lives on and moves about the skin, but for the

most part lays its eggs (nits) in the seams of clothing. It is here that the condition should be looked for The rows of tiny white, oval eggs can be seen with the naked eye. On the skin there is evidence of much scratching and excoriation, particularly on the shoulders nits may occasionally be found on the lanugo hairs of the body

Pediculosis Capitis

Here the lice live on the scalp, particularly the back and sides. Girls and women with long hair are particularly affected.

As a result of itching and scratching, infection occurs. Impetigo of the scalp should always lead to a search for lice The posterior cervical glands may be enlarged and cause a mistaken diagnosis of rubella.

DIAGNOSIS

By parting the hair carefully the lice themselves, translucent and agile, can sometimes be seen. It is the easily visible eggs or nits that give the diagnosis. They are distinguished from scurf by being regular in shape and by being found the same distance up the hair (Plate XVIII). They can be moved up and down the hair but not pulled off sideways. As the louse lays the nits on the surface of the scalp, the duration of infestation may be gauged by the distance from the scalp that the nits are found on the hair (which grows about 1 mm. a month) Make quite certain of the diagnosis before telling the patient that she is lousy If there is any doubt an affected hair should be put under the microscope, when the structure of the nit will be clearly seen. (See Fig. 8.)

Pediculosis Pubis

Phthirus pubis affects the body hair particularly the pubic hair There is a great specificity about these three types of lice. Head lice do not live outside the scalp hair pubic lice never invade it. But the eyebrows and eyelashes, as well as the body hair may be attacked in a heavy infestation. When restricted to the pubic hair they are known as crabs

Since lousiness must be caught by body contact, pubic lice have sometimes been regarded as a para-venereal disease, though we may assume that it can also be caught from towels and by non-venereal contact. The patient, having discovered crabs regards them with peculiar abhorrence, and attempts to rid himself of them by violent measures—strong insecticides, paraffin, petrol, or anything that comes to hand. In the inflammatory reaction that ensues, everything is washed away including the lice.

Treatment of Pediculosis

All lice are killed by contact with D.D.T. This is used either as an emulsion (applicatio dicophani N.F.) or as a powder (conspersus dicophani N.F.). The unique quality of D.D.T. lies in its very prolonged effect, even in traces. One dusting of the powder is, in fact, sufficient to deal with any lice hatching out of nits up to ten days later. In practice it is applied rather more liberally.

The treatment for all types is fundamentally the same:

(*a*) The body or scalp is washed.

(*b*) The emulsion is applied and left for twenty-four hours. (Where control of the patient is difficult, it may be left in the scalp for a full week.)

(*c*) This is followed by another bath or shampoo.

(*d*) The dusting powder is applied daily for seven to ten days.

NITS

These can only be removed from hairs by assiduous tooth-combing. As the lice are killed as they hatch out, the nits only represent empty shells and may be disregarded. Cosmetic reasons may demand hair-cutting or tooth-combing, but this decision may be left to the patient. It should not be enforced. To shave off pubic hair affronts no-one's dignity, but to crop a woman's head is to violate her personality.

Clothing

In the rare cases of Vagabond's disease, the clothes would probably be destroyed in any case (and new ones provided by a beneficent authority). But spraying with D.D.T. is quite effective.

TINEA CRURIS ('DHOBIE ITCH' RINGWORM OF CRUTCH)

Common in young adults. Spreading rings on each side of inner thighs. Caught by use of infected towels, jock-straps, etc. Perspiration important.

TINEA PEDIS ('ATHLETE'S FOOT')

Between and behind toes, especially between the fourth and fifth. Also on *sole and sides of foot. Blisters, scaling or heaped up macerated* skin. Soft corns may form. (Thickened macerated skin may occur without fungus infection from poor hygiene in *sweaty* feet.)

TINEA CAPITIS (SCALP RINGWORM)

See page 130

ONYCHOMYCOSIS (RINGWORM OF NAILS)

Very difficult to eradicate. Usually caused by *Trichophyton rubrum*.

CATTLE RINGWORM

(*a*) of skin (*b*) of beard.

Seen on exposed parts in farmers and slaughterers. Children in country areas are frequently affected, sometimes by intermediate contact with gates, sheds, etc. It may affect large areas of the scalp or face. Usually occurs on the arms in farmers. Caused by trichophyta of different types. The species varies to some extent from county to county.

The appearance is highly characteristic (Plate XVI), though sometimes *mistaken for a carbuncle. A large, boggy inflamed, pustular* granuloma forms ('kerion'). The pustules are sterile. Spontaneous recovery occurs in most cases in six to eight weeks; a few may last many months. In this variety of ringworm infection the body reacts violently to a foreign species of fungus and an allergic reaction occurs. Immunity develops and by the fourth week the fungus is being destroyed. At this time a transient general rash (trichophytid) may appear; in children there may be considerable malaise. However widespread and pustular the lesion looks, resolution takes place, usually quickly once it starts. The skin returns completely to normal and hair grows again on the scalp or beard.

Special varieties of ringworm infection occur such as *favus*, nodular lesions on the legs from *Trichophyton rubrum*, pityriasis versicolor on the trunk, and erythrasma. These are not considered here.

TRICHOPHYTIDS

This is an allergic reaction to the presence of fungus. It may occur on the palms (one variety of cheiropompholyx) with ringworm of toes. *Always look at the feet and groins when a patient has eczema of the palms*

Diagnosis

clinically by experience
microscopically by examination of scales from edge of lesion, (see Part V Chapter 44 page 244)
culturally by growths on special media.

Management of some General Ringworm Infections

These are usually misdiagnosed and overtreated. Failure to respond to simple treatment is due to

Neglect of general care and hygienic measures.
Lack of care in removal of infected horny skin.
Overtreatment, leading to contact dermatitis.
Constitutional factors, i.e. hyperhidrosis.
Recurrences from infected apparel.

1 Keep the affected parts dry and cool. Towels must be retained for individual use. All forms of communal bathing, particularly shower baths in institutions, are liable to spread infection. After drying, undecylenic acid dusting powder is useful Socks should be light and changed frequently Tight pants, jock-straps and other underwear liable to constrict or chafe should be forbidden.

2. Failure to remove regularly the infected and macerated skin between the toes is a frequent cause of failure in treatment. For this purpose the patient can use the blunt end of a nail-file, a sharpened mustard-spoon, or a small penknife blade and eyebrow tweezers. These should be cleaned and kept in spirit.

3 The particular fungicide used is of less importance than other factors. Many proprietary fungicides are liable to sensitize, particularly those containing organic mercurial substances. Castellani's paint (pig. carbol-fuchsin) and Whitfield's ointment (salicylic and benzoic acids) are effective and can be alternated weekly Penicillin and other antibiotics should be avoided absolutely in ringworm infections.

4 If recurrences occur despite adequate treatment and apparent complete cure

(*a*) Enquire closely about common sources of infection (a shower-bath or swimming-baths)

(*b*) Enquire into family bathing arrangements (damp floors, common bath mat). Encourage the wearing of slippers in the bathroom.

(*c*) *Disinfect shoes or other garments in the following way*

(i) Enclose in a shoe-box together with a swab of 15% formalin.

(ii) Leave for twenty-four hours.

(iii) Expose to the air for forty-eight hours before wearing.

(*d*) Re-examine the foot hygiene of the patient. Hyperhidrosis may be present and need attention.

Ringworm of the Scalp

Invasion of the hair of the scalp by a fungus is often difficult both to diagnose and to manage. It is a contagious condition and public health aspects are involved.

The scalp may be attacked by

CATTLE RINGWORM

This form of ringworm of the common trichophyton groups may attack the scalp. The course of the disease is similar to that on other hairy parts of the body and a kerion forms at the second or third week. (Plate XVI.) Large areas of the scalp may be involved and the face may be invaded, especially in children. The condition looks alarming, but resolution starts at the fourth or fifth week and is usually complete by the eighth—irrespective of treatment. The kerion, by its intense inflammatory reaction, destroys the fungus and causes the hair to be shed. Perfect hair growth is usual in the course of some months, but overtreatment may lead to scarring. These lesions are sometimes mistaken for carbuncles and opened in error Some constitutional disturbance occurs at the third week.

OTHER FORMS OF TRICHOPHYTON

Rarer forms of trichophyton sometimes affect the scalp.

FAVUS

This infection is rare in England, occasionally seen in Ireland, and more commonly in Eastern Europe The infection is a very indolent one, often undiagnosed, and may continue for years, several members of the family being affected. The cup-shaped, adherent crust with a mousy odour lead eventually to a scarring alopecia.

MICROSPORON INFECTION

This is caused by

Microsporon felineum (canis)—the dog and cat ringworm.
Microsporon audouini—human ringworm.

M. felineum infections are caught from infected kittens or puppies and may be passed several times from human to human host, eventually dying out, *M. audouini* is the true human ringworm, giving rise to persistent epidemics. But these are becoming rare, due to effective measures of control. Most of the outbreaks of ringworm of the scalp occurring in England are of the cat variety

Microsporon infections are virtually limited to children below the age of puberty and die out spontaneously at this age. Adults are attacked so rarely that this possibility can be dismissed in considering treatment. Parents and nurses may be reassured on this score.

The fungus more commonly attacks the scalp of boys (because of shorter hair), and grows both on the scalp and to a considerable distance down the hair follicles, stopping at the partly keratinized cells of the hair root. It does not extend below this point.

This penetration into the hair follicles is the reason for the difficulty in the elimination of the infection by surface agents.

DIAGNOSIS

(a) Circular patches of a dull colour with no inflammatory crusts. In cat ringworm, patches may be present elsewhere.
(b) The hairs in the affected areas break off a little above the scalp and are lustreless and brittle. The disease should not be confused with alopecia areata, where the scalp is completely bald and where exclamation-mark hairs are found, with seborrhoea or psoriasis of the scalp where the hairs are not broken, or with trichotillomania, where the hair is twisted or pulled out as a nervous habit. (Plate XIII.)

When the ringworm infection is suspected, the patient should immediately be referred to a doctor and probably to the dermatologist for confirmation. This can be obtained by Wood's light examination of the patient, microscopic examination of the hair and culture of the hair

TREATMENT

Many fungicides have been used on scalp ringworm, but there is no evidence that any one is superior to Whitfield's ointment in an emulsified or coconut-oil base. There is at present no effective

fungicide which can penetrate to the hair root. It seems that an immunity (at least to the cat variety) develops over a period.

If cross-infection is prevented, children with cat ringworm are allowed to continue at school in some parts of the country but local authorities vary in their attitude. Most cases are treated by epilation.

EPILATION

This is achieved by X-ray

A carefully adjusted dose causes the hair to fall out in about two weeks. It should be given at large radiotherapeutic centres experienced in the technique. The mistakes and tragedies that occurred in the early days of X ray therapy are now almost unknown. The following nursing points are apposite

1 If the Medical Officer decides that epilation is necessary the parents should have the reason for this explained and should know exactly what it entails. A consent form will have to be signed. They may be reassured with some confidence about the harmlessness of the procedure.

2. The hair is cropped very short immediately the disease is diagnosed and then shaved either before, or at the time of, the X-ray epilation.

3 A sedative will usually be given, particularly to young children.

4 When the hair falls out it is collected carefully and burnt. The brush and comb are discarded.

5 A linen cap should be worn, preferably from the time of diagnosis and certainly from the time of X-ray epilation.

6. A fungicidal ointment is used daily until the new hair appears.

7 After the hair has fallen out the patient is examined under the Wood s light for three clear weeks before he is regarded as cured.

LOCAL EPILATION

In localized cat ringworm of the scalp, manual epilation can sometimes be carried out successfully under Wood s light control. (See page 241) This consists of removing with forceps all the hairs in and surrounding the affected area. Hairs not visibly affected may show the disease by fluorescence. This must be repeated until no fluorescent hairs are seen in three successive weeks. Not a very successful method, but it is useful in babies and where small areas are involved in children approaching puberty

PROPHYLAXIS

Once the diagnosis has been confirmed, other children in close contact should be examined under the Wood's light. In communities

such as schools, institutions and children s homes, this should be undertaken once a week for three weeks and affected children isolated until treatment is complete. Such outbreaks should be notified to the Medical Officer of Health, who will be able to give a great deal of assistance in the examination of other children the control and limitation of major outbreaks, and in the detection of the source. If more than one case occurs in patients at the same school, the Medical Officer of Health should be informed.

In a large epidemic reported by Beare it was found that some children, realizing that they would be away from school for several months, passed the ringworm to each other by selling it at so-much a rub Thus do the perversities of human nature defeat the best intentions of science.

CHAPTER 22

Warts

The term wart is often applied loosely to any small tumour of a horny nature arising from the skin. It is wrongly used when referring to such dissimilar conditions as cellular naevi (moles), skin tags and keratoses.

To be of any value at all, the term is best confined to these three entities

(1) THE COMMON OR VULGAR WART (VERRUCA VULGARIS)

This is of virus origin.

The common wart Occurs on the hands, face, scalp or limbs. It is often filiform on the face and scalp

The plantar wart (verruca). This is merely a wart on the sole of the foot which, by constant pressure, grows inwards.

Plane ('juvenile') warts A variety seen on the hands and face in young people.

Venereal warts (*Condylomata acuminata*) These are common warts arising on the genitalia or perianal region. They are soft, filiform and exuberant, and are quite different from the flat condylomata of secondary syphilis.

It is probable that there are two varieties of the common wart with a rather different natural history

(2) SEBORRHOEIC WARTS (SENILE ACANTHOMATA)

These are not of virus origin. They are probably late-appearing naevi, seen in middle-aged and elderly people on the face, scalp and trunk. They become brown and then black in colour as they enlarge. They can quite easily be removed by curettage, caustics or diathermy (See Part V pages 234–40.)

(3) PITCH WARTS

These are not of virus origin. A form of keratosis occurring on the exposed skin of patients who have been working with tar for long periods.

The Common Wart

This is due to inoculation with a virus. The incubation period is long—which explains the seedlings that often occur after apparently successful treatment. It is wise to review all treated warts in six weeks and again in six months. The mode of transmission of the infection is not accurately known, but the virus may be carried from one skin to another via towels, shoes and swimming-pools. The greater incidence of plantar warts in girls is probably due to dancing with bare feet on wooden floors.

Warts may be single or very numerous. Plane warts usually occur in great numbers and may arise on scratch marks, giving rise to a characteristic linear appearance.

Treatment of the Common Wart

The tendency of warts to disappear for no apparent reason at all is well known. That this does not always occur in a given length of time is shown by the extremely long duration of some warts. It is believed by some authorities that methods of suggestion, such as hypnosis may cause a wart to disappear There is not yet enough definite evidence to support this view and the claims of wart charmers and their successful clients are difficult to evaluate accurately

If few in number warts are best dealt with either by carbon dioxide snow or by curetting. (See Part V page 234) Diathermy-coagulation destruction is used by some.

In all cases success will probably occur in 60 to 70 per cent of cases and will depend less on choice of technique than on the experience of the operator

Other forms of caustic treatment with phenol, silver nitrate, podophyllin and so on are occasionally used with varying success. (This may be due to the caustic or to the faith with which it is applied.)

On the whole, warts are overtreated. Most of them disappear spontaneously in time if left alone.

Plantar warts if solitary can be treated with carbon dioxide snow or be curetted. If many are present, or if there are a number of small verrucae running together to form a plaque ('mosiac wart') they will usually respond to the formalin-salicylic acid plaster treatment. (See Part V page 226.) This treatment may also be used on multiple warts elsewhere.

Radiotherapy and radium

An accurately estimated dose will destroy a solitary plantar wart in a high proportion of cases but this must never be repeated

to the same site, even years later. It has the advantage of being painless, but carries the risk of an intractable radionecrosis if the patient has the dose repeated for any recurrence of the verruca. For multiple warts it has little justification and should be avoided.

CONDYLOMATA

The most effective treatment for condylomata lies in painting them with 12·5% podophyllin in spirit. A considerable inflammatory reaction occurs in the course of two or three days. With penile warts care must be taken that phimosis does not occur as a result of the inflammatory oedema. If this is severe the patient should bathe the area in cool permanganate solution and apply a bland cream. This treatment should always be carried out by a doctor.

PLANE WARTS

Of all types of warts these are regarded as the most susceptible to suggestion or 'charming'. They are usually so numerous that heroic measures should in any case be avoided. They may be touched with a coloured paint, such as gentian violet or eosin, with the firm accompanying suggestion that they will 'fall off'. Spontaneous disappearance is often preceded by itching—a fact that can be made use of during 'charming'.

Prophylaxis of Warts

There is no known way of preventing a recurrence of warts in those liable to them. The presumed virus is doubtless ubiquitous and immunity to it varies in individuals and in families.

Those affected with plantar warts should be careful to keep their own slippers and gym-shoes and not walk without them in the family bathroom or the school changing-room. It is probable that many plantar warts (which are common in school-children) originate at swimming-baths and gymnasia and by dancing and doing exercises in bare feet. It is reasonable to exclude children with plantar warts from the swimming-bath until they are cured. But, generally speaking, *attempts at prophylaxis are of doubtful value.*

CHAPTER 23

Urticaria

Urticaria is also called hives or nettle-rash

Definition

An eruption of highly irritating, transitory erythematous papules, plaques or wheals. Attacks may be short lived, repeated or continuous.

Causes

Urticaria is an allergic reaction to a great variety of agents nettle stings and insect bites drugs and infections toxins and disturbed emotional states. Food poisoning, considered by most people to be a common cause, is in fact a rare one.

Chronic persistent urticaria is usually psychological in origin. In these cases a full and careful history may reveal a completely unsuspected anxiety which the patient has not appreciated. This is often associated with feelings of repressed hostility and aggression against some person or situation. When such factors exist and are brought to light (if necessary by an abreactive technique) the urticaria may subside with dramatic suddenness.

In acute cases, sensitivity to drugs must first be excluded. Acetylsalicylic acid (aspirin) is a cause of urticaria in susceptible people. Penicillin, quinine and antipyrin are sometimes responsible.

In many cases, the cause cannot be found.

The immediate palliative treatment of urticaria

A severe attack of urticaria is accompanied by distressing irritation. Calamine and lead lotions, antihistamine creams and cold compresses are used as local palliatives. Antihistamines by mouth should be given in a dose sufficient to control the lesions. This may be much greater than that usually recommended but side-effects often limit the amount that can be given. In severe cases they can be given intravenously or intramuscularly

Angioneurotic Oedema

This occurs most commonly in middle-aged women and may be

inherited. It appears suddenly in the form of large urticarial swellings involving the mouth, tongue, throat, eyelids or hand. The cause is often obscure septic foci and bacterial toxins are apparently responsible in some cases, pyschological factors in others.

Because of the size of the lesions and the sites commonly involved the condition is potentially dangerous. Sudden oedema of the glottis has sometimes been the cause of death. In a patient subject to these attacks with any frequency and where immediate treatment with injection of adrenaline (10–20 m.) is not possible, a dose in an Ampin phial (see Appendix, page 270) should be left for the patient to use herself—only of course when an attack starts and while waiting for the doctor or nurse to arrive. This may be a life-saving measure.

Papular Urticaria

A particular form of urticaria occurring in children, commonly known as heat-spots. Urticarial lesions give place to small, hard,

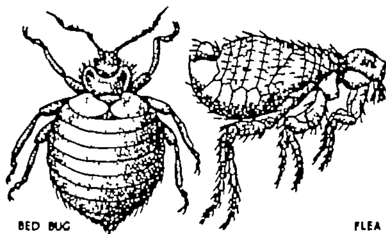


Fig. 9 Diagram of the bed bug and a flea.

highly-irritating papules. These are widely scattered over the body and limbs but occur particularly in groups under tight clothing bands and on the hands, feet, ankles and legs.

It has been shown that papular urticaria is frequently due to an allergic reaction to the bites of insects, especially fleas. (See Fig. 9) The insect host is usually a domestic animal, but birds whose nests harbour large numbers of fleas are sometimes responsible.

MANAGEMENT

The condition is very distressing to children and recurs over a number of years. In most cases it can be cured quickly by a search for the responsible insect and its elimination with D.D.T. dusting powder. This should be dusted in clothes, pyjamas and bed-linen—and on the family pet's favourite chair. Dogs can be dusted with it, but not cats (who lick it off): there are suitable alternatives for these. Bed-bugs still occur in England in old houses and wooden-bedsteads. (See Fig. 9.) Any enquiries on these lines are likely to be resented (and unfruitful.) It is better to present the dusting powder without comment and note its effects. Papular urticaria invariably clears up rapidly in hospital.

Heat-spots are still commonly regarded as due to some disorder of the blood and the question of an insect cause must be approached with the greatest tact, especially if it concerns a domestic animal. He who casts an aspersion on my dog insults me.

CHAPTER 24

Chronic Paronychia and Diseases of the Nails

Conditions affecting the nails may be primary or secondary

Primary Conditions

These may be summarized as follows

Dystrophies

Inherited, or arising later as a developmental failure. Sometimes associated with hair and teeth defects. Once they are recognized as such, management consists entirely of general measures of nail hygiene.

General disease leading to disease of the nail

The distorted, thickened or cracking nail of hypoparathyroidism, the spoon-shaped brittle nail of anaemia. The management here consists of

(*a*) recognition of the primary disease
(*b*) the administration of iron as a non-specific routine treatment
(*c*) any specific treatment indicated by the primary condition.

Skin disease also affecting the nail, e.g. psoriasis

Here the management is that of the disease itself Psoriasis of the *nails is extremely difficult to eradicate and the patient must be* brought to accept the condition. Spontaneous clearing often takes place irrespective of treatment. Sometimes small doses of X-ray therapy are useful.

Ringworm of the nails (see page 142)

Secondary Conditions

These are those in which the neighbouring skin is diseased, and secondary distortion occurs.

Eczema. The nails may become ridged, distorted and thickened. Here treatment is directed towards controlling the eczema. Nails

may share with the skin of the hands the brunt of occupational trauma and irritation, either in the form of contact from irritants or by mechanical or physical trauma leading to haemorrhages, cracking or avulsion.

Chronic Paronychia

This important cause of nail dystrophy is a common source of disability and deserves a separate heading.

Definition Chronic infection of the nail fold, leading to distortion and secondary infection of the nail itself The infecting organism may be pyococcal or not uncommonly a yeast (*Candida albicans*).

Predisposing factors

The most important are

Alkalis and degreasing agents, which remove the protective surface of the delicate nail-fold and surrounding skin.

Peripheral vascular stagnation or constriction, as in patients with acrocyanosis.

Moist or sweaty hands and prolonged immersion in water It is sometimes seen in children who suck their fingers.

Other factors are

Trauma to the nail-folds, causing cracks and splits.

Poor nail hygiene either by neglect or by excessive manicuring and nail-picking.

Sugar and yeast Confectioners, cooks and housewives are especially prone.

Diabetes where conditions are favourable for secondary monilial infection.

The sequence of events is as follows. A crack forms in the nail-fold due to the riding up of a fold of skin on the nail or to breaking of the skin from trauma. Alkalis cause further swelling and inflammation. Bacterial or yeast infection then occurs. A sinus forms under the nail-fold and spreads along it, the nail-fold becoming swollen, inflamed and tender The nail grows up distorted and twisted and is commonly discoloured. *Candida albicans* is often found in scrapings of the discoloured area of nail.

Management

The following general advice must be followed carefully·

1 *Complete avoidance of soap and detergents*. Though admittedly difficult for the housewife to achieve, this is indispensable for

a cure. Loose rubber gloves, over cotton ones, must be worn for short periods only during wet work. Cooks may have to be taken off work in the initial stage. (See note on techniques of avoidance of soap and water.)

2. The nail-folds still intact must be carefully and gently pressed down to prevent riding-up on the nail. This is carried out with an ivory
3. Any new cracks or splits should be covered for a day or two with a small piece of adhesive plaster
4. Lanolin or a cosmetic lanolin cream, can be smeared into the nail-folds at night. Cotton gloves should be worn to prevent injury to the nails.
5. A 1–2% solution of gentian violet in 70% spirit, or Castellani's paint, on a flattened orange stick, lightly tipped with a little wool, is inserted well under the nail fold and as far down as infection extends, once or twice every day. Bradosol 0.5% in 70% spirit or Dequadin paint may also be used and have the advantage of being colourless. Combined hydrocortisone and antibiotic lotions are also proving of value in this condition.

Cure is likely to take from three to four months and the patient must then restrict her use of alkalis to the minimum and carry out a careful nail-hygiene daily. The chronicity of this condition is chiefly due to the difficulty of avoiding alkalis and of keeping the hands dry.

The Management of Ringworm of the Nails

The toe-nails are affected more commonly than the finger nails. In *Trichophyton rubrum* infection even avulsion and scraping of the nail-bed is usually unsuccessful unless total extirpation of the nail-bed is performed—a drastic procedure—the distorted and thickened nails must be filed regularly and fungicidal ointments applied to any affected fingernails to minimize the spread.

After nail-avulsion, a tulle gras dressing is applied daily for a few days, then mercury oleate or other fungicidal ointments until the new nail grows.

CHAPTER 25

The Management of Gravitational Syndromes

Varieties

Gravitational syndromes embrace those conditions affecting the legs that depend mainly on the effect of gravity. These usually—but not always—occur in patients with primary varicose veins, those who have had a deep vein thrombosis ('white leg') or as a result of cardiac failure and other diseases causing venous back pressure. Among manifestations of this syndrome are

Ulcers

The true varicose ulcer occurring over a knot of varicosities on the leg following injury or inflammation.

Thrombo-phlebitic ulceration. Deep, indolent and often extensive ulcers seen in an area of sclerosis and chronic oedema of the lower part of the leg.

Intercommunicating vein thrombosis and ulceration, occurring at the site of one of the three intercommunicating veins on the lower and inner part of the leg. The sclerosis is more localized. Deep vein thrombosis is usually present as well.

Superficial thrombotic ulceration in the leash of superficial veins below the ankle.

Hypertensive and arteriosclerotic ulceration. Small, punched-out, painful ulcers on the lower part of the leg. Though not truly gravitational these ulcers demand the same general management.

Other types of ulceration of the leg are not considered here.

Conditions other than Ulceration

Hypostatic or varicose eczema. Eczema occurs on the leg, as elsewhere, from a variety of reasons. It may be seen around leg ulcers, or without these but with gravitational oedema or at the site of varicose veins.

Purpuric eruptions and capillaritis. Purpura and other evidence of

capillary damage often shows itself first in the legs and may be confined to these.

Oedema Persistent oedema follows deep vein thrombosis. In the course of time it is converted gradually into fibrosis, strangling the blood supply and predisposing the skin to ulceration. The control of oedema before this stage is reached is an important—and neglected—prophylactic procedure

Complications

Infection. All gravitational ulcers are secondarily infected, a mixed flora of organisms abounding in the necrotic and debilitated skin. If the circulation is free and unimpeded by oedema, this infection is overcome naturally by rest and adequate support. Reduction of the chronic oedema surrounding the edges of the ulcer is of great importance. Antiseptics and antibiotics are not necessary and lead to sensitization reactions.

Contracture Contractures of the muscles occur in all old-standing ulcers, due partly to disuse and partly to fibrosis. In the early stages, energetic ambulant treatment overcomes this. Even in long-standing cases, a combination of massage, exercises and constant re-education in correct walking will bring about a surprising degree of improvement. *Contractures are part of the price paid for long periods of bed treatment and one of the most cogent reasons for avoiding this*

Such contractures should be regarded with the same abhorrence and shame as those following fractures and neurological conditions. *It is a foreseeable complication which is preventable.*

Lymphoedema Lymphatic oedema follows obliteration of the lymphatic channels in extensive, encircling ulcers.

Sensitization eczema Eczema round ulcers may be due to

(i) An original area of hypostatic eczema on which an ulcer has supervened. The management is as for gravitational syndrome.

(ii) So-called infective eczema The result of sensitization to discharge from the ulcer

(iii) Dermatitis venenata. The result of applications used on the ulcer particularly antibiotics, strong disinfectants and patent remedies. The shape of the patch of eczema is distinctive, covering the area of dressing applied.

Management of Hypostatic Eczema

Control of the gravitational thrust is essential. Dressings should be simple, soothing and cool, and the leg elevated with blocks under

the foot of the bed or supported by occlusive bandages. Viscopaste bandages are particularly useful for small ulcers associated with a large area of subacute or chronic eczema, especially when this is being rubbed.

Acute lesions are treated with dyes, wet dressings or creams, as described for acute eczema elsewhere. Under ideal conditions resolution will take four to six weeks.

An autosensitization eruption frequently complicates a patch of hypostatic eczema, appearing on the other leg and arms. This is often extensive and greatly prolongs the course.

General Management of Gravitational Syndromes

Once the diagnosis of a gravitational ulcer is made—whatever its particular type—the aim of treatment is

To prevent or minimize stasis and the accumulation of oedema.

To improve the blood supply and drainage of the ulcer bed.

To restore the action of the venous heart the function of the muscles and the flexibility of the leg.

To overcome early fixation and contractures of the ankle joint.

Control of Infection

This follows automatically on control of the oedema. The successive applications of one antibiotic after another without improving the vitality of the skin, is illogical, wasteful and unnecessary When the leg ceases to be waterlogged a remarkable improvement will take place in the most infected ulcer Once these general measures have been set in motion, some harmless bactericidal agent can be incorporated in local treatment. Suitable ones are eusol, lotio rubra (one-quarter strength at first) zinc cream and dyes Graneoidin, neomycin or polymixin ointment.

Management is based either on complete rest or on a combination of pressure therapy and massage known as the Bisgaard technique. This has been widely used in one form or another as a logical method of attack on the problem. It is an adjuvant to many surgical forms of treatment and may account for some of their success.

Bed rest This can be avoided in most cases. It is tedious for the patient and uneconomical for the hospital. It encourages foot-drop, contractures and muscle-wasting unless the patients are constantly under the care of skilled physiotherapists.

It is of value in the following particular cases

Where gross sepsis or oedema is present. For a short initial period of control.

holding on to some support, such as table or a chair on one side she rises slowly on tip-toes and back again on both legs, thirty times then on one leg at a time. Initially most patients sway forward or bend their knees and give a false impression of heel-raising. This must be corrected.

Further Advice to the Patient

1 Shoes must be well-fitting and comfortable. If they are too loose they do not give adequate support to the leg and foot and may lead to a painful ankle.

2. The patient must rest her leg high for a short period each day A foot-stool is not enough mantelpieces are out of fashion the end of a sofa is adequate.

3 The housework should be so arranged that long periods of standing are broken and alternated with those involving walking or resting.

4 When she has to stand, the patient should keep the leg muscle moving.

5 She should set herself the task of consciously controlling the movements of her legs in walking, and correcting any malfunction. On the whole, women walk badly and it is the exception to find a springing gait or good muscle control and balance. Fashionable shoes, tight skirts and the habit of generations are against it.

Surgical Treatment of Gravitational Syndrome

This will not be discussed here. It is of value where extensive primary varicose veins are associated with varicose eczema and in intercommunicating vein incompetence (Cockett s operation). It is of less value in other forms. Much of the success of surgical measures is due to concomitant compression techniques or bed rest at the same time

As always, success is influ enthusiasm

GRAFTING

It is *logical* to graft

1 When the ulcer sho g n is slow in doing so

2. Where a size or where tis.

It is *illogic* heal, particula is of value in

General Measures in Management

Obesity This restricts walking and impairs the vascular tone. Flat feet and poor posture follow

Hypertension Apart from ulcers of arterial and hypertensive origin, a high proportion of patients with hypostatic ulcers, particularly those that are found to be recalcitrant, have some degree of hypertension.

Cardiac disease may lead to dependent oedema and poor nutrition of the skin. When bilateral oedema of the legs is present, cardiac failure should first be excluded.

Anaemia. By reducing the peripheral exudation anaemia may retard healing. This is especially true of middle-aged women, where a haemoglobin of 70 to 80 per cent is often found.

Intercurrent disease and *poor nutrition* delay healing.

Finally one should consider

1 *Social factors* These are of considerable importance. The gravitational syndrome is commonly seen in middle-aged women having homes and families to look after They cannot rest adequately They stand for long hours in the kitchen, and when they do rest, sit with their legs immobile and dependent. Isolation in remote districts, poverty bad housing, insanitary conditions and poor intelligence all lead to neglect of any ulceration that is present.

2. *Psychological aspect of the leg ulcer* Some patients make use of their ulcer to secure the attention of their family Quite unconsciously they resist cure or once cured, continually relapse—though appearing to be following every instruction. Thus they sit, extracting sympathy from their relatives and concern from their friends, monopolizing their favourite chair by the fireside, and accepting their ulcers as part of woman s lot It may indeed be an unwise physician or nurse who attempts too vigorously to change the even tenor of their days But this is no excuse for neglecting the great majority who accept their ulcers only because they believe them incurable.

CHAPTER 26

Artefacts and Excoriations

Dermatitis Artefacta

This is the name given to *self* inflicted lesions on the skin—usually ulcers, scars or burns. These are bizarre in shape and angular or linear in outline they arise suddenly and are usually multiple. According to the intelligence and special knowledge of the patient, they mimic to a varying degree some natural disease or perpetuate artificially a disease suffered previously Attacks may continue over many years, or be spasmodic.

The production of artefacts involves pain—or at least discomfort—and inevitably leads to hospital attendance and investigations. Why does the patient do it? There seem to be several different mechanisms concerned.

CONSCIOUS MECHANISMS

Malingering

Artefacts produced with a motive. A situation of obvious gain exists (escape fom National Service or from work desire for compensation in alleged cases of assault).

Neurotic excoriation

A milder form. Seen chiefly in women, occasionally in men. A picking or gouging of the skin. There may be some pre-existing disease (as in acne excoriée). Occurs in obsessional patients with an unstable or unhappy background. They usually need psychiatric help as well as simple local measures to minimize the effects of their picking. Any underlying skin disease should be treated confidently and with reassurance. Neurotic excoriation is similar to nail-biting, hair-pulling and other obsessional traits.

UNCONSCIOUS MECHANISMS

These are often hysterical in type. A situation of gain exists (desire for sympathy and attention or an escape from difficulties).

Compensation neurosis

A variety with strong motives but unconscious or only half-conscious mechanisms involved, i.e. the worker with industrial dermatitis

—usually suing his firm for alleged neglect—who exaggerates or provokes his lesions to make a greater appeal to sympathy This grades imperceptibly into those states of persistent eczema, incurable dermatitis, and so on, that are not usually included in the term dermatitis artefacta

Hysterical

The main group The patient denies knowing how the artefacts came about—and, indeed, does not know

Psychotic

Self-mutilation without obvious cause or motive. May also have hallucinations (acarophobia, paraesthesiae, etc.) Vivid and dramatic lesions occur The patient is obviously out of touch with reality Seen in schizophrenics, paranoics, and in some hallucinatory states with toxaemia, such as chronic alcoholism.

MANAGEMENT

Often difficult. Once suspicion is raised, the patient may be dealt with as follows

1 If malingering is suspected, watch carefully and try to catch in the act. Do not take into hospital any longer than is necessary for this. Return patient to work as soon as the diagnosis is made.

2 If the patient is obviously psychotic, refer to the psychiatrist and do not attempt to treat the skin.

3 For the majority of patients, who may either be half-consciously or unconsciously producing the artefacts, there are three ways of proceeding

(a) Admit to hospital. Watch very closely If new lesions appear find a way to take the patient from her bed and locker—perhaps for bathing—and search her surroundings carefully Check her clothes for concealed articles and leave her not a handkerchief to weep into Obviously one must be fairly certain of the diagnosis before these steps are taken. Finally watch the food. Mustard has often been taken from the supper-table and applied to the skin later at night. Other substances cunningly used are disinfectants (check sluice and lavatory) phenol and lysol cigarettes (the burn is characteristic) knitting needles, pins and other instruments (less common). Women seldom produce artefacts on their face (just as they rarely cut their throats in suicide)

(b) Enclose the part affected in occlusive bandages. Lesions may then develop on the other limb—highly suggestive—or at the

edge of the bandage. (But determined patients can get under these bandages with knitting needles.)

(c) Let the patient know that you are sympathetic to her difficulties, while recognizing that her lesions are a sign of genuine—if simulated—illness. Once a sympathetic *rapport* has been achieved, she may readily give voice to her troubles, or at least stop producing lesions.

Although it is tempting to regard these patients as unbalanced, neurotic or malingerers, most of them are unhappy people needing affection or attention and unconsciously seeking this dramatic way of obtaining it. The discovery and treatment of artefacts is often time-consuming and difficult and the cure unrewarding. Many of the patients have wholly inadequate personalities and, once found out, disappear to try their luck elsewhere rather than changing the pattern of their lives and having to make disagreeable changes. But the production of an artefact is occasionally an isolated act in a person pushed to the edge of her reserves. Its discovery and the subsequent elucidation of the patient's difficulties that made it necessary are then well worth while. With help, sympathy and some adjustment of their environment they may live out their lives as useful and happy citizens.

PART FOUR

SPECIAL PROBLEMS OF RECOGNITION AND MANAGEMENT

CHAPTER 27

Abnormal Conditions of the Infant's Skin
Skin Signs in Mentally Deficient Children

CONDITIONS SEEN AT OR SOON AFTER BIRTH

Many different forms of naevi occur (see Chapter 1). The commonest are the vascular naevi called haemangiomata. These are of various types.

(*a*) **The Strawberry Naevus**

This is seen at birth or shortly after It grows for seven or eight months but seldom longer Deeper types of the same naevus ('cavernous haemangiomata') are often large at the outset.

The mother can be assured that the vast majority of these naevi disappear spontaneously in six years or less. Most dermatologists now believe that, with a few exceptions, no treatment is required—or even advisable. (Plate II) When they are on the buttocks or genitals, they ulcerate, but heal rapidly with a simple antiseptic ointment. The process of ulceration destroys the naevus without need of further therapy

The mother can also be reassured that the baby will not bleed to death if the naevus is accidently scratched. Bleeding is seldom excessive—often no more than from any cut. Firm pressure for a few moments will arrest it.

(*b*) **The 'Port Wine Stain**

This stain at the nape of the neck is very common. It is harmless, cannot be seen under the hair when this grows, and needs no treatment. A similar stain may appear at the glabella, forehead and eyebrows. If this is faint in colour it will probably disappear within the first year of life. If deeper in colour or more extensive it is likely to persist and may require treatment with thorium X.

(c) Deep Port-Wine Stain

These stains on the face and other parts of the body do not fade and require specialist advice. Covermark and similar heavy cosmetic creams are of great help in disguising them later in life.

Other types of naevi, ranging from pigmented and hairy moles to generalized malformation, are outside the scope of this account. In general, they do not disappear If small and on areas normally covered, they may be ignored if not, expert advice must be sought.

Blistering Eruptions

The presence of large clear blisters on the skin at or soon after birth always gives rise to anxiety All causes of this are rare.

EPIDERMOLYSIS BULLOSA

This is an inherited disease in which blisters occur on the feet and elsewhere. In severe cases the skin may separate during delivery and the infant be born dead or die early in life. In others, there is some persistent disability

CONGENITAL SYPHILIS

One form of this consists of a bullous eruption on the hands, feet and buttocks. Snuffles, condylomata, a laryngeal cry enlarged spleen and other confirmatory signs are present. The mother's Wassermann test is always positive.

ACUTE STAPHYLOCOCCAL INFECTION OF THE SKIN (IMPETIGO NEONATORUM)

A generalized bullous eruption accompanied by signs of severe illness and toxaemia. Before sulphonamides were discovered this condition was nearly always fatal. Severe cases are now rarely seen. Treatment consists of parenteral aureomycin, Achromycin, etc. Mild cases may respond to local treatment (see Impetigo). Isolation must be rigorously enforced and the source of the infection traced.

Erythrodermas in the Newborn

Equally rare are babies born with red, scaling skins—sometimes covered with collodion-like scales. (Plate III) The prognosis varies some infants die. Contractions and strictures may occur round the mouth, eyes and ears, and nursing is extremely difficult. The skin should be cleaned gently with oil only and the scales only removed when they separate easily Antibiotics repel secondary infection but must not be used indiscriminately on the skin if they are

likely to be used parenterally later These infants are nursed in air conditioned tents loss of heat from the erythematous skin is very considerable.

Paronychia

Newborn infants sometimes develop infection of the nail-fold. This is due to a foreign staphylococcal infection and occurs in small epidemics, in association with other forms of neonatal sepsis. Nasal staphylococcal carriers among nurses are frequently responsible. Provided that the infection is not extensive or acute, treatment on simple lines usually brings about resolution in a short time. Local gentian violet, Tyrothricin, Graneodin or soframycin are all satisfactory parenteral antibiotics are not necessary Take care not to damage the nail-folds. In young infants tags of skin around the edges very easily become torn and provide the point of entry of infection. Light mittens should be worn.

CONDITIONS SEEN IN THE OLDER INFANT

Napkin Rashes (see page 114)

Infantile Eczema (see Chapter 18)

Cradle-Cap (Milk-Cap ')

An accumulation of squame from the skin of the scalp is normally present on infants scalps. If excessive, it may be cleaned off gently An old, boiled, soft tooth-brush is of ideal consistency stiff hair brushes should not be used. The scalp can be cleaned with nut oil or with 1% salicylic acid in oil or emulsifying ointment. One per cent ammoniated mercury can safely be added for short periods. The scalp is shampooed or cleaned with emulsifying ointment and water If the cradle-cap is extensive or becomes inflamed or infected (Plate IV), initial treatment with zinc cream or a suitable antibiotic ointment may be called for

Eczematoid (Seborrhoeic ') Dermatitis

This is discussed elsewhere.

Scabies

This is seen in the infants of infected mothers.

SKIN SIGNS IN MENTALLY DEFICIENT CHILDREN

Mental deficiency may occur alone or be associated with other naevoid or congenital dysplasias and dystrophies. The common varieties are

Cretinism

Now rarely seen; recognized by the characteristic dull, stupid appearance, the harsh, dry, yellowish skin which is thrown into folds, the flabby musculature, coarse wiry hair and protruding tongue. The extremities and lips are cyanosed and the subcutaneous tissue excessive, with distinct fat pads above the clavicles.

Mongolism

Some of the features are similar to those of cretinism, but the hair is fine and silky and the skin soft. The protuberant tongue lies between everted lips; these may show a central crack. The little finger is curled inwards, the hands are splayed, with hypermobility of the joints. An excessive amount of downy lanugo hair is seen at the base of the spine. (The presence of excessive lanugo hair is common to all children with mental deficiency.)

Tuberose Sclerosis (Epiloia)

The characteristic skin features develop in childhood and are demonstrated in speckled, bright-red spots in the central area of the face, fibrous growths beneath the nails and soft, colourless tumours on the lower part of the back.

Angiomatous Conditions

An extensive port-wine naevus affecting the whole part of one side of the body and the contra-lateral side of the face, associated with cerebral angiomatous malformations. Mental deficiency or epilepsy occurs in some cases.

Severe Naevoid Conditions

As the skin and central nervous systems have a common origin, examples of combined defects should be common. With the exception of neurofibromatosis, they are, in fact, rare.

CHAPTER 28

The Menopause and its effect on the Skin The Ageing Skin

The menopause is a time of endocrine adjustment and of psychological stress. The decline in the female sex hormones that marks the end of the ovulatory cycle leads to an instability of many bodily functions. Apart from the endocrine changes themselves, headaches, sleeplessness, rapid mood swings, depression, restlessness and fatigue occur Changes that have a bearing on the behaviour of the skin are

An increase in weight This occurs in women with a family history of obesity The skin becomes more vulnerable to intertrigo and infective dermatitis in the body folds and skin flexures.

Vascular phenomena. Flushing is a well-known accompaniment of the menopause and is particularly prevalent on the face. A general tendency to peripheral vasospasm is also common. Raynaud's phenomenon and erythrocyanosis may occur for the first time.

Hair The scalp hair may become thin, especially if it is fine in texture. Such thinning is diffuse, though rather more marked on the vertex and on the frontal notches In some women it may extend considerably at the menopause, or shortly after but a period of stability is eventually reached. These patients can be reassured that they will not become entirely bald.

At the same time an increase in facial hair may occur

Sensations of itching Sensations of prickling, irritability and itching for which no organic cause can be found are rather common. Itching associated with a diabetes of late onset can easily be over looked unless the urine is tested on two or three occasions.

Genital changes Genital pruritus may accompany senile vaginitis, atrophic lesions of the vulva or neurodermatitis. Vulval pruritus is intensified.

Hyperkeratotic eczema of the menopause This consists of hyperkeratotic eczema of the palms, soles and knees, associated with osteoarthritis and obesity It is improved by oestrogen therapy

Management

An anxious patient suffering from any skin disorder needs a great deal of reassurance at this time. The menopause is aptly termed the change of life and often presents problems of readjustment that cause tension and conflict. When there are children, these may well be leaving home and marrying when there are none, all hope of maternity fades with the last menstrual cycle In both cases the patient has to adjust to a new situation.

Pruritus, neurodermatitis, rosacea or urticaria may occur as projections of this anxiety Patience and sympathy are needed, and must be extended generously Sedatives, oestrogens and holidays all play a part in helping the patient through this phase. Profound mood changes should be regarded with anxiety especially if sleeplessness accompanies them. Involutional melancholia develops insidiously in those with previous tendencies to depressive episodes.

THE AGEING SKIN

The skin is no more immune than other organs to the process of ageing. Its adaptability becomes less and its functions more restricted. Wrinkles develop, the hair becomes sparse, the epidermis thins and the perspiration decreases. Though sebaceous activity becomes generally less, clumps of sebaceous glands on the face form little tumours, easily mistaken for rodent ulcers. Degeneration of collagen and elastic tissue occurs in the exposed areas the thick, yellowish, furrowed appearance of the neck or face seen in elderly people who have worked out of doors for many years is striking and unmistakable. There is less tolerance for alkalis and degreasing agents. Eczematous changes occur in the winter on dry skins irritated by thick woollen clothing, friction and changes of temperature. A condition of intense general irritation and excoriation, known as senile pruritus or senile prurigo is probably due to vascular changes. It is extremely difficult to cure

Degeneration of the supporting tissue of the dermis draws apart the walls of the small blood-vessels and leads to patches of senile purpura on the slightest injury Telangiectases and angiomata occur on the face and lips. Pigmented patches on the hands, forearms and face (senile lentigos) may occasionally give rise to low-grade

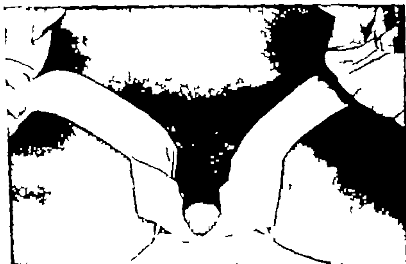
malignant melanomata. The nails—particularly the toe-nails—become thickened and distorted.

Management of the Senile Skin

Patients with dry skins who have been susceptible in the past to wool, alkalis, and climatic changes are likely to have more trouble as they grow older Irritation at sites of clothing friction or after hot baths is intensified and may herald a more generalized senile pruritus. Such patients must learn to live within the diminishing tolerance of their skins.

Elderly patients confined to bed are particularly susceptible to bed-sores. See that the sheets are straight and that there are no breadcrumbs or other hard objects pressing on the skin. Ensure that sufficient protein is taken in the food. Emollient creams containing lanolin or glycerine are useful if the skin is excessively dry (See formulary) Patients with senile pruritus or eczema do not tolerate much washing and should be advised to reduce their bathing to a minimum. Bran and emulsifying agents should be used instead of soap. Simple applications are applied to any eczematous patches that occur

Do not neglect the skin disorders of the elderly Though often insignificant by comparison with other diseases, they occasion much distress. Small miseries, often repeated, are more vexing than great catastrophies. The patience and resignation of old age does not always allow them to be accepted with equanimity When simple measures cease to help, special advice should be sought. When even this fails, consolation remains.

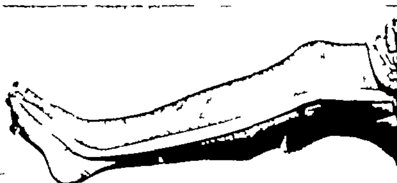


(a)
Separating skin surfaces in the groin

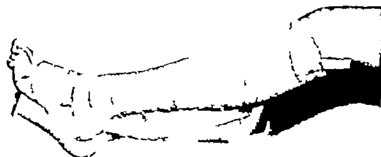


(b)
Separating skin surfaces under the breasts

XX. Dressings for intertrigo and infections in skin folds

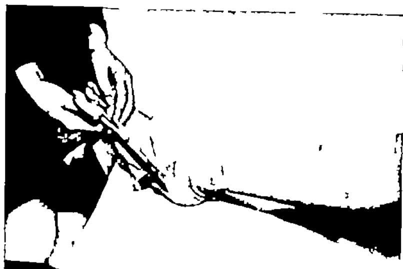


(a)

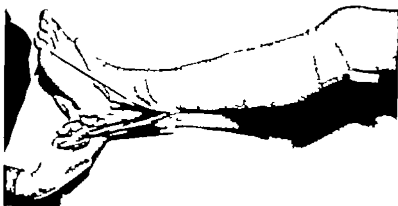


(b)

XXI (a) and (b) Application of 'Tubegauz' strip to facilitate the removal of occlusive bandages. The strip is applied unopened

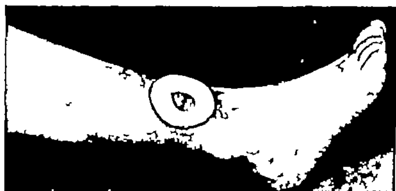


(c)



(d)

XXI (c) and (d). The tube is opened up with Mayo scissors



(a) Pad in position



(b) Pad kept in position with Tubegauz

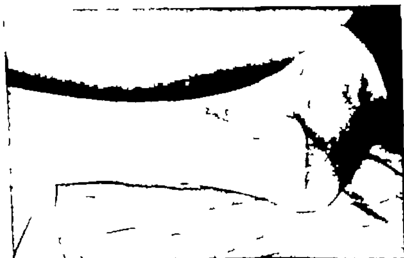


(c) Blue line bandage in position

XXII Pad and pressure bandage

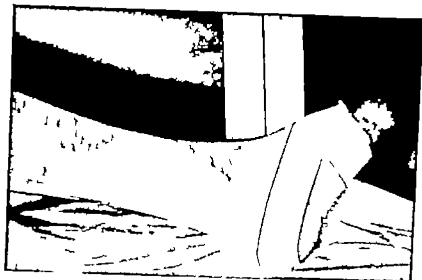


(a)

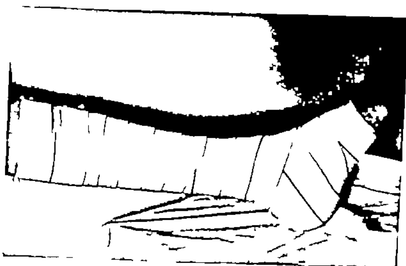


(b)

XXIII (a) and (b). 'Strip' pressure pad over area of intercommunicating veins



(c)

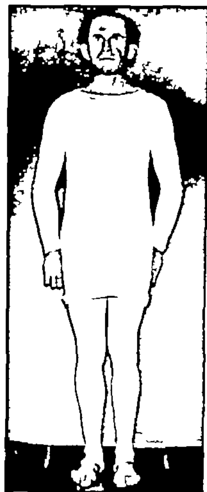


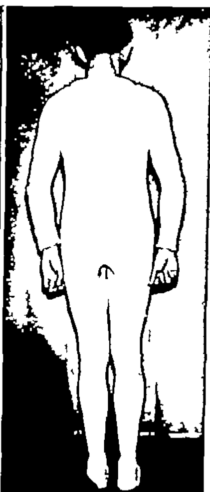
(d)

XXIII (c) and (d). Application of pressure bandage over strip pressure pad

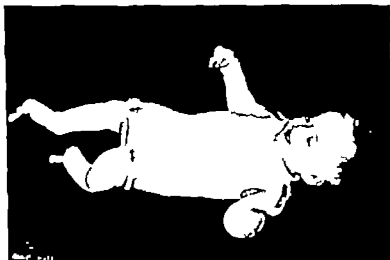


XXIV Use of cradle in gravitational conditions


(a)


(b)

XXV (a) and (b). Whole-body covering with tubular gauze



(a)



(b)



(a)
A protective stocking



(b)
An arm-covering over a Coltapaste bandage
XXVII (a) and (b). Tubular gauze dressings



(a)
Occluding paste with greaseproof paper

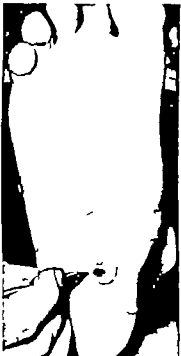


(b)
Occluding paste with Scotch tape

XXVIII. Dithranol treatment of psoriasis



(a)



(b)



(c)

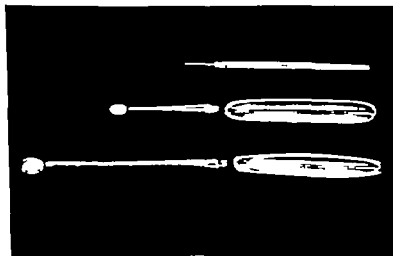


(d)

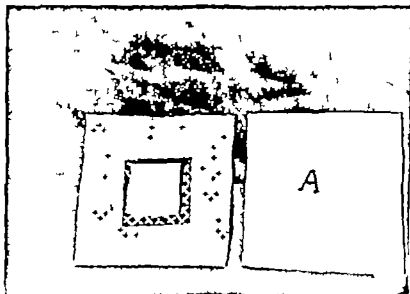
XXXII (a) (b) (c) and (d). Carbon dioxide snow treatment of verrucae



(a)
A double-ended curette



(b)
XXXIII. Various curettes



(a)
A patch-test square



(b)
Positive nickel reaction using a sixpenny-piece

XXXIV The patch test

CHAPTER 29

Skin Conditions Resembling Infectious Fevers

The appearance of a rash resembling that of the infectious fevers, especially when it occurs in a hospital ward or institution, calls for immediate isolation until the diagnosis is established. Several other conditions, particularly drug rashes, may give rise to error. Most difficulty arises from the differential diagnosis of chicken pox and measles. While she is not expected to diagnose all such rashes, the nurse should know something of their nature.

Chicken-Pox (Varicella)

This vesicular eruption is usually distinctive, with crops of small clear vesicles surrounded with a light pink halo becoming pustular and then scabbed. Other conditions resembling it are

Smallpox (variola)

The premonitory symptoms are more severe, the patient complains of pain in the back, persistent headaches and is obviously ill. Though the diagnosis must be made by an expert, any adult who develops an acute vesicular eruption after a severe febrile attack of 'influenza' should be isolated. The mild attenuated form of smallpox known as alastrim may give rise to particular difficulties. This is rare, most cases of severe vesicular eruption in adults being, in fact, chicken-pox. Caution is needed when the patient has recently come from abroad (especially by plane).

Zoster varicelloides

In some cases of herpes zoster ('shingles') a 'spill-over' takes place with the eruption of isolated chicken-pox-like vesicles on other parts of the body. There has been considerable dispute as to whether this is chicken-pox or herpes zoster, the consensus of opinion being that it represents a blood-borne spread from the original zoster lesion. The diagnosis is usually sufficiently clear and the infectivity is not heightened.

L

VACCINIA

Vaccinia occurs very rarely either after vaccination or as an eruption in those who handle infected cattle. The history is usually sufficiently obvious to suggest a diagnosis.

PAPULAR URTICARIA

In children, papular urticaria is often vesicular—even bullous—and the lesions may be mistaken for those of chicken-pox. The absence of constitutional disorder the scattered distribution of the spots, and the severe irritation, are usually sufficient for the diagnosis *to be made with confidence. The characteristic greyish,* scabbed pustule of chicken-pox is not seen.

PRIMARY HERPES SIMPLEX

A first attack of herpes simplex in young children may be generalized The patient is often very ill Vesicles are scattered over the body or localized in one or more sites. Although the course is self limiting with the development of immunity it may be hectic. The diagnosis must be made by a doctor and confirmed on the basis *of agglutination tests and scrapings of the lesion.* Severe ulceration of the mouth in young children, often diagnosed as thrush is sometimes a primary herpetic manifestation.

KAPOSI'S VARICELLIFORM ERUPTION ("ECZEMA HERPETICUM")

A child or young adult with atopic eczema who becomes inoculated with herpes simplex or vaccinia may develop this severe condition, which is sometimes fatal. Varicelliform lesions are most intense on all areas affected (or previously affected) by the eczema.

IODIDE ERUPTION

Iodides may be the cause of a vesicular eruption in those patients who become sensitized. When such lesions occur in an adult and are unaccompanied by any constitutional disturbance, iodides must always be considered as a cause. These are present in some cough mixtures, many patent blood mixtures and some disinfectant lozenges.

PITYRIASIS LICHENOIDES ACUTA

*A rare condition resembling chicken-pox but without constitu*tional symptoms.

Measles

The main difficulty in diagnosis arises in drug eruptions—particularly those due to barbiturates and sulphonamides. A drug fever

may occur but there are no Koplik's spots and no premonitory upper respiratory or conjunctival symptoms.

Rubella

Here again, drug eruptions are the only likely source of confusion. The posterior cervical glands are enlarged with scalp infections, particularly with pediculosis or infected seborrhoeic dermatitis. If sulphonamides have been given and have caused a drug eruption a wrong diagnosis may easily be made.

Scarlet Fever

Scarlet fever can be mimicked by

(*a*) Drug eruptions, particularly those caused by arsenicals, penicillin, sulphonamides and streptomycin.

(*b*) The condition known as scarlatiniform erythema, a toxic eruption following a streptococcal infection. It is not uncommon in children and young adults. Constitutional disturbances are slight or absent, peeling is concomitant with the rash, or follows soon after and the course is shorter

Drug Eruptions and Virus Eruptions

A number of non-specific eruptions may accompany virus infections, such as glandular fever These may be difficult to distinguish from rashes due to drugs given in the course of treating the original infection. However those associated with the infections are usually scattered and petechial or papular and those due to the drugs, morbilliform, erythematous or urticarial.

CHAPTER 30

The Recognition of Irritant and Sensitivity Reactions

Although it is important in cases of industrial dermatitis to distinguish sensitivity reactions from those due to irritants, it is not always easy or even possible to do so Often both may occur together *Damage from skin irritants may allow sensitizing substances to be* absorbed more easily and eczematous conditions damage the skin and make it more vulnerable to irritants. The points that are helpful in distinguishing these two types of dermatitis are

Age of patient Sensitivity eruptions occur at any age. Those due to irritants are more common with advancing age, when the skin becomes less resistant, drier and more subject to wear and tear

The *onset* of an eruption due to irritants will be more gradual and continuous that due to sensitivity reactions abrupt and unforeseen.

An irritant reaction may be more easily and directly related to the patient s occupation, hobbies or housework, and occur in direct proportion to contact with a known irritant. Attacks due to sensitivity reactions occur at intervals or supervene on one another in an irregular manner and are seldom related by the patient or their medical attendant to their true cause.

The *distribution* of the eruption is suggestive. Lesions due to irritants occur only in the areas directly in contact, usually the hands. Those due to a sensitivity reaction may occur on all the exposed parts or irregularly and in bizarre patterns on areas exposed to the sensitizing agent. The face is more inclined to be affected by sensitization eruptions. The eyes, for instance, are nearly always affected in primula sensitivity Patterns of clothing or of cosmetic sensitivity are determined by the particular sites affected. Though irritants are seldom applied to the face, some workers may repeatedly wipe their foreheads with oil-soaked rags or hands contaminated by irritants, producing a secondary eruption there or on the neck.

Course of the Eruption. Where irritants are concerned, this is slow and variable. With sensitivity eruptions it is usually speedy provided the patient is removed from the cause. In the absence of complicating factors the skin will return to normal and will remain unaffected as long as further exposure does not occur Once the skin develops an eczematous dermatitis as the result of contact with irritants, recurrences are the rule if the patient returns to handling these in the day's work.

CHAPTER 31

The Recognition of Drug Eruptions

A drug eruption is a skin reaction (of any one of a variety of types) due to sensitization to a drug, or to its toxic effect. Sometimes these two factors are present together one person showing a toxic reaction to a much smaller amount of a drug than another But the likelihood of a toxic eruption appearing naturally increases with the total amount of the drug given. This is especially so in the toxic eruptions due to heavy metals, which are more prone to occur when the liver or kidneys are damaged and excretion of the drug cannot properly take place.

However in most drug eruptions, the cause lies in an acquired *sensitivity to the drug or to one component of it.*

The difficulties arising in the recognition and diagnosis of this group of eruptions are

To Obtain an Accurate History

Patients do not recognize as drugs (or even as medicines) many of the substances they are habitually accustomed to take the occasional aspirin and laxative is forgotten and it is often necessary to ask time and time again before it is remembered. Sometimes the eruption is so characteristic that the diagnosis can be made even when the patient denies taking the medicine Ignore the denial if you are fairly sure of the diagnosis.

Particularly in hospitals, a patient may be taking more than one medicine at a time. *Unless the eruption is characteristic,* it may be difficult to decide which is at fault.

Sensitivity or intolerance to a drug can occur after a person has taken it for long periods or on many previous occasions without harm.

The sensitivity can be due, in a mixed preparation, to some other component than its main constituent.

If the patient has been sensitive previously he is likely to show the reaction almost immediately the drug is exhibited the next time. But

the degree of sensitivity may be variable and this phenomenon cannot be relied on.

If an idiosyncrasy is present, only a very minute amount of the drug is necessary to provoke a reaction, which often persists long after the drug is withdrawn.

The eruptions are in many cases not characteristic and resemble toxic rashes due to the original condition under treatment.

The phenomenon of cross-sensitivity has been recognized in recent years. Procaine, for instance, cross-sensitizes patients to sulphonamides, and this, in turn, to paraphenylenediamine, a clothing and hair dye. Thus a patient who has had procaine for a tooth extraction may become susceptible to sulphonamides. It is probable that many other examples of cross-sensitization are yet to be discovered.

Some drugs are more inclined to give rise to drug eruptions than others for example, phenolphthalein, gold, mercury and arsenic are more liable than cascara, bismuth or lead.

Drug reactions are not, of course, limited to the skin. The blood, liver and kidneys may be affected, giving rise to fever jaundice, thrombocytopenia purpura and so on.

NOTE The urine should always be tested in the case of suspected drug eruption. Look for albumin, blood and porphyrins (the urine changes reddish-brown on standing)

Diagnosis

Suspect a drug eruption

(a) when a patient presents with an unusual eruption that does not fit any recognized picture

(b) when a patient presents with an eruption resembling one of the exanthemata (e.g. measles or rubella) without any confirmatory signs and in the absence of an epidemic

(c) if a patient, during the course of treatment, develops some change over areas of skin other than those being treated by external applications or if the eruption becomes worse

(d) in all cases of vesicular or bullous eruptions and in exfoliative dermatitis.

Some drug eruptions give a very characteristic picture which is diagnosed on sight. These are mentioned below Others are non-specific. Intradermal and other cutaneous tests carried out in the acute stage can be misleading and dangerous. When the eruption has settled down, the diagnosis should be confirmed in retrospect

by giving a small quantity of the suspected drug by its usual route.

NOTE The dose should be initially much smaller than that which provoked the eruption and is increased in stages if confirmation is essential.

The short list of drug eruptions appended below are, of course, far from complete. As has been stated above, almost every medicine is capable of giving rise to an eruption, some of them distinctive in character and some of them quite non-specific. These, however are the more common presentations that are likely to be met

THE FIXED DRUG ERUPTION

Particular features of this are

1 *One or more patches of livid erythema which occur on any part of the body*

2 A flare-up in the same site each time the drug is given.

3 Eventually a mixed picture of pigmentation, staining and bright erythema. It has been noticed that transplants of skin are affected at the same site In other words, there is a localizing mechanism *not inherent in the actual skin of the site. Fixed drug eruptions* are most commonly produced by antipyrin and phenolphthalein (in laxatives) and, more rarely by more than twenty fairly common drugs such as aspirin, barbiturates, mercury quinine, and sulphonamides.

GENERALIZED ACUTE URTICARIA

Iodides in cough mixtures and after bronchograms and pyelograms. Penicillin injections (even as long as three to four weeks after) Aspirin.

MORBILLIFORM AND SCARLATINIFORM ERUPTIONS

Sulphonamides. Penicillin Chloromycetin. Streptomycin. Barbiturates. Arsenic. Quinidine.

A combination of high fever and a generalized morbilliform or scarlatiniform eruption, where the condition is not one of the exanthemata, should arouse suspicion of drug sensitivity particularly of the barbiturate group. In this case there may be associated symptoms of confusion and restlessness.

BULLOUS AND VESICULAR ERUPTIONS

Iodides. Bromides. Phenobarbitone may produce an acute bullous erythema multiforme.

GENERALIZED DERMATITIS BECOMING EXFOLIATIVE

Intravenous arsenical therapy Mercury Gold and all heavy metals. Streptomycin and P.A.S.

ECZEMATOUS REACTIONS

Mercury Gold. Barbiturates Chlorpromazine.

LIGHT-SENSITIVITY ERUPTIONS

Plaques, papules or eczema limited to the exposed areas. Sulphonamides and chlorpromazine particularly other drugs less commonly

PURPURIC ERUPTIONS

Particularly localized to the legs and buttocks and of a reticulate pattern and cayenne-pepper colour Sedormid, Adalin, Carbromal and other drugs of the carbromylurea group. A very distinctive picture.

Some Other Common Types of Reaction

Atabrine (Mepacrine), chiefly used for malaria and lupus erythematosus, gives rise to a persistent generalized lichenoid eruption.

Stovarsol (Acetarsol) sometimes gives rise to erythema.

Fowler's solution (liq arsenicalis), given over a long period, produces—many years afterwards—a characteristic picture of pigmentation, keratoses of the palms and soles and multiple intra-epidermal carcinomata.

Barbiturates produce either a sensitivity type of eruption with urticaria, erythema and pruritus or toxic, morbilliform rashes, sometimes purpuric and sometimes resembling measles. Rarely a fixed eruption occurs.

Bromides and Iodides most commonly produce halogen acne, which resembles normal acne except that there are no blackheads. Both bromides and barbiturates have produced eruptions in infants through mother's milk.

Penicillin may give rise to drug eruptions in as many as 5 per cent of cases. A great variety have been recorded. Urticaria is the commonest and may be both severe and persistent. An acute anaphylactoid reaction occurs.

Dilantin and Epanutin give rise to a characteristic hypertrophy of the gums, seen in epileptics.

Chlorpromazine (Largactil). An increasing number of reactions to Largactil are becoming recognized. The eruption is similar to that provoked by sulphonamides.

Streptomycin and P.A.S. Rashes are common during prolonged courses of these drugs in tuberculous cases. The rash is usually morbilliform or erythematous, but may progress to an erythroderma lasting some months.

Serum rashes Serum reactions are commonly seen after anti tetanus serum or other serum injections. They usually arise one to two weeks after injection and the patient may be quite ill with joint swellings, arthralgia, fever and malaise. Post vaccinial eruptions are also seen, and though they may appear bizarre and extensive, usually settle down quickly

Management and Treatment of the Cases

The eventual diagnosis and treatment will, of course, depend upon the decision of the doctor in charge, but the nurse should make quite sure what medicines the patient is having and has had recently

In the very rare cases of anaphylactoid reactions with penicillin and other drugs, collapse takes place within a few minutes of an injection. Adrenaline must be given immediately a doctor must be called and artificial respiration started.

SPECIFIC MEASURES

All drugs must first be discontinued

For heavy-metal poisoning, B.A.L. can be given. There is a standard course for this, lasting six to ten days. Remember that injections must be given deeply into the muscle with a sterile needle as sepsis otherwise is very likely to occur

Plenty of fluids should be taken and elimination encouraged. When a toxic barbiturate eruption is associated with coma, the patient needs hospital treatment.

Antihistamines may be of some use when the drug is still circulating, e.g. in the early stages of a penicillin urticaria, but are not likely to be useful when the reaction becomes fixed in the skin cells. If antihistamines are given, they should be given in a dose large enough to be effective, e.g., promethazine (Phenergan) 50 mg., at *night or twice a day* with or without short-acting antihistamines during the day (a heavy dose such as this cannot be given unless the patient is in bed)

Always suspect intolerance to a drug if a patient with eczema gets steadily worse, fails to sleep with barbiturates, or becomes restless and depressed. It is far better to take him off barbiturates completely and change to another hypnotic.

Always remember that the very smallest amount of a drug can cause an eruption and that this may be compounded in an apparently innocuous laxative or headache pill. It seems to be true that people likely to produce drug eruptions are those who find they cannot tolerate certain drugs in other ways.

Always ask a patient whether any reactions have occurred with previous antibiotics and injections.

CHAPTER 32

Management of the Sore and Ulcerated Mouth

In acute forms of erythema multiforme—particularly in the so-called Stevens-Johnson syndrome—the mouth is considerably ulcerated and the lips raw and cracked. The patient is distressed and feeding becomes difficult. In such cases, A.C.T.H or cortisone may be given to ameliorate the acute peak of the condition. Decicaine or hydrocortisone lozenges are of some palliative value. Frequent mouthwashes of glycerine and thymol are useful. Only fluids should be given during the first few days, if the ulceration is severe. Complan and Casilan are useful food substitutes or supplements. Tube-feeding is sometimes necessary An emollient to the lips is often appreciated.

Thrush (Moniliasis)

This is caused by a yeast infection, and occurs less commonly nowadays than in the past and is chiefly seen as a temporary complication of broad spectrum antibiotic therapy Apart from this it occurs in the terminal stages of severe febrile or wasting diseases. Careful attention should be paid to the mouths of all old people, particularly when any dehydration is present.

Thrush is recognized by the presence of rapidly spreading white patches and plaques which, on removal, leave an eroded, slightly bleeding base. In children it is to be distinguished from diphtheria membrane and from herpes simplex (see below).

Treatment The mouth is painted three times a day with 1% gentian violet solution or lozenges of gentian violet may be sucked. Bradosol or Dequadin lozenges are also of value. If occurring after antibiotics, large doses of riboflavin are given. Otherwise, it is a question of treating the general disease that is always present.

Herpes Simplex

A primary attack of herpes simplex (the common cold-sore?) may occur at any age in infancy and childhood and be mistaken for

an attack of thrush. The infection is self-limiting but often attended by considerable constitutional upset. It is either confined to the mouth or extends to the lips and face and other areas of the body in the form of vesicles on a slightly reddened base the temperature is raised. Sometimes these children are very ill.

Aphthous Ulcers

These occur in crops over a long period. The cause is unknown. Food allergies do not play a part. If numerous and painful, hydrocortisone lozenges are helpful if few and infrequent, touching with chromic acid or iodine is sufficient. There is no successful standard treatment. Rubbing individual ulcers with neomycin and hydrocortisone ointment may help.

Vagina

The vagina and vulval mucosa are sometimes involved together with the mouth in ulcerative conditions. Genital ulcers are often extremely painful. They occur either singly or in groups.

The presence of vaginal or vulval ulcers may be ignored or concealed by the patient. These may be of importance in diagnosis and should always be brought to the attention of the doctor if mentioned to the nursing staff.

Thrush occurs commonly in the vagina. It is treated with 1% gentian violet painting effective control can also be obtained by the use of Acigel, Genteral or Nystatin pessaries. A new preparation, Dequadin, also seems useful.

CHAPTER 33

The Care of the Skin in Diabetics   Pruritus Vulvae

The diabetic patient is prone to a number of troublesome skin conditions which are often the cause of admission to hospital. Sugar is stored in the skin as well as in the liver and the relative proportion of skin sugar may be increased in the mild obese diabetic. This encourages the growth of infecting organisms on the skin and explains the liability of these patients to superficial infective lesions.

Diabetic patients in general may suffer from

Pruritus vulvae This may be the presenting symptom of diabetes. Diabetic vulvitis has a characteristic moist, red appearance.

Generalized pruritus occurs in about seven per cent of diabetics. There is often little to see on the skin to account for this

Intertrigo and intertriginous eczema around the groins, labial folds and buttocks are common in fat diabetic women. Staphylococcal infections may be troublesome. Balanitis occurs in men.

Monilial infections occur in the vagina, on the vulva, and in the groins.

Gangrene This is one of the main complications of diabetes. It may be associated with ringworm of the toes. Any sore, painful, inflamed red toe in a patient known to have diabetes, calls for close observation and rest. If it does not settle down very quickly the patient should be moved to hospital Typical gangrene may occur after a preceding red inflammatory stage or it may occur initially in the form of a perforating ulcer of the foot.

Carotinaemia. A slight yellowish colour of the skin is sometimes noticed in diabetics, due to an excess of carotenoids in the blood and horny layer of the skin.

The diabetic patient who has shown any sign of vascular disease must be advised to take particular care to wear shoes that do not cause pressure on the toenails. The feet must be kept dry powdered and free from ringworm infection. The self-treatment of ingrowing

toenails or of any infection of the feet is to be avoided. Boric acid or fungicidal foot powder should be dusted in the socks or stockings twice a day and the feet washed and cleaned regularly dried well and rubbed gently with alcohol. A lanolin skin cream or the application of pure lanolin is also helpful if the skin is dry

Areas of fat atrophy may very occasionally occur at the site of insulin injections. Local sensitivity reactions to insulin also occur Reactions are nearly always found to be confined to one batch or type of insulin. But if they do continue, an antihistamine such as Piriton (10 mg.) can be given together with the insulin in the same syringe.

PRURITUS VULVAE: INVESTIGATION AND MANAGEMENT

There are a number of organic causes for irritation of the vulva and adjoining parts. These must be excluded before psychological causes are considered

Diabetes Frequently an early symptom of this disease
Urinary infections
Vaginal infections, particularly with monilial vaginitis.
Threadworms By reflex action, particularly in children.

A number of other conditions such as

Ringworm infections
Atrophic conditions of the vulva
Menopausal atrophy
Pubic lice
Psoriasis
Seborrhoeic dermatitis
Contact dermatitis from ointments or contraceptives.

INVESTIGATION

1 Test the urine A catheter specimen should be sent for culture.
2. If a vaginal discharge is present, a high vaginal swab should also be sent.
3 Scrapings may be taken from the edge of the inflamed skin.

MANAGEMENT

The patient should be nursed with her legs apart, avoiding any irritation from clothing. Where intertrigo is marked, strips of linen should be placed between all folds (see Plate XX). A cradle is put over the bed, and the sides of the bed-clothes are left open to allow

as much air as possible to circulate and to prevent maceration from sweating. Bland creams, dusting powders and mild antiseptics are most frequently used. Gentian violet may be incorporated in zinc cream when any infection is present. Drying paints and lotions are used with effect in later stages. An absorbent dusting powder (see formulary page 257) is of value in some cases.

In some patients no organic cause will be found. A full and careful history often reveals marked psychological causes in many of these the management of the pruritus is the management of the underlying psychological stress. It may be a tension symptom, relatively easy to deal with but often it represents an hysterical defence mechanism against intercourse or an unconscious rejection of marital or maternal responsibilities.

Where the irritation is confined to a localized area on the labium or thigh, it is likely to represent a patch of neurodermatitis of this type. Although hydrocortisone is an effective local suppressive agent, it should not supplant a general appraisal and, if possible, correction of the underlying conflict.

CHAPTER 34

Bed-Sores, Cracks and Fissures

Bed-Sores

These are best called pressure-sores. They occur in

(a) elderly debilitated patients in bed

(b) patients of any age confined to bed for long periods with immobilizing diseases, such as arthritis

(c) paraplegics and those with sensory loss in any pressure area

(d) incontinent patients.

They are not seen more commonly in patients with skin diseases unless there is an accompanying hypoproteinaemia, debility old age or immobility They occur mainly on the sacral area, buttocks and heels and are essentially vascular in origin.

PREVENTION OF PRESSURE-SORES

The technique traditionally laid down for the prevention of pressure-sores is not ideal. Vigorous rubbing with spirit or washing with soap and water are both liable to damage the skin. The most important procedures are

Ensure an adequate high-protein intake and correct any anaemia that is present, *This is of pre-eminent importance*

Change the position of old patients as frequently as possible.

See that the draw-sheet is not rucked up and that crumbs and other hard articles do not slip down under the patient.

Encourage the maximum mobility for all old patients. They should be encouraged to sit up and move about during the day Modern geriatric practice decries keeping patients in bed the whole time. Gentle massage and ultra violet light are helpful, but over-vigorous local stimulation does as much damage as in any other area of local vascular insufficiency The skin should be kept clean, dried and powdered and all soap should be thoroughly rinsed off.

The routine use of a standard barrier cream has recently been advocated and is helpful in keeping the buttocks dry It does not

eliminate the need for other measures but does reduce the nursing time that need be spent on drying incontinent patients.

The development of a pressure-sore is usually a sign of inadequate nursing, but not necessarily of bad nursing.

TREATMENT OF PRESSURE-SORES

When the skin becomes red and discoloured, very great care must be taken to remove pressure from the site, either by propping the patient with sandbags or putting the affected legs up in a sling. Various other devices can be adopted by the use of a certain amount of imagination. In extreme cases the pelvis may be pinned and its pressure on the bed reduced by traction.

Once the skin is broken and an ulcer forms, it should be treated with a non-sensitizing application. Secondary infection may be reduced by the application of antibiotic creams, but these should be given for three or four days only at a time, alternating with cod-liver oil, Eusol or mild astringent lotions. As with vascular ulceration elsewhere, pressure-sores heal equally well with little local application, provided that the circulation is improved and pressure avoided.

In extensive, long-standing pressure-sores, where the immobility of the patient does not allow their position to be changed easily more elaborate measures may be necessary Plastic surgery is sometimes called for An extensive pressure-sore which is spreading is a sign of worsening of the general condition. The toxaemia and loss of body proteins which accompany it inevitably cause further deterioration in the general state.

Cracks and Fissures

Unlike pressure-sores, these occur more commonly in patients with skin conditions. They are most often seen as a post-anal crack in areas of intertrigo. They also occur in the groins, behind the ears and in areas of chronic eczema, particularly on the hands and feet.

Management consists of

1 Avoidance of pressure, sweating and maceration, by keeping the patient mobile and the affected part cool.
2. Control of any underlying skin condition causing or associated with cracking. In many cases cracks can be ignored and will heal when the skin condition is cured.
3 Sealing of the crack by the daily application of a lotion containing 2–5 per cent each of silver nitrate and tannic acid, or

the application of the solid silver nitrate pencil every two or three days. Cracks may also be touched with pure phenol.

4 Once the crack is formed, a paste dressing is effective, e.g. aluminium paste, zinc paste with or without gentian violet or Siccolam. Graneodin or other antibiotics have a place in treatment for short periods. A mixture of neomycin and hydrocortisone is proving of value. Where the crack lies in a moist and macerated area, Castellani's paint is useful.

Silicone water-barrier preparations are under trial for the protection of particular areas of skin from discharges, excreta and urine. Several such creams are available these have different formulae and should be chosen to suit the particular conditions. Silicone, 10–20% may also be incorporated in various standard dermatological bases, such as Siccolam or yellow soft paraffin type pastes and ointments. But an efficient water-resistant barrier cream is probably equally effective.

CHAPTER 35

Management of Common Conditions Affecting the Skin of the Foot

Conditions due to the Particular Function of the Foot

These include corns, calluses, ingrowing toenails, onychogryphosis

Corns, calluses

These occur at sites of abnormal or repeated pressure, just as occupational calluses occur on the hands in many trades and industries. Those occurring on the little toe are extremely common and only call for treatment when infected Those beneath the heads of the second and third metatarsals (and indeed, across the whole of the anterior part of the sole) are associated with some degree of flat foot. Occasionally this is due to peripheral nerve lesions or old poliomyelitis, but mostly it is due to bad function in walking and ill-fitting shoes. Friction due to the sliding of feet in loose shoes that are unsupported by a tarsal strap is worse than pressure due to tight ones. Local *treatment consists initially of paring down the corn*, after softening it with salicylic acid plasters but unless the orthopaedic condition is rectified they will certainly return. They may be extremely tender but can usually be distinguished from warts in the following ways

(a) Calluses are more tender on direct pressure than on squeezing laterally The opposite is true for warts (verrucae)

(b) The application of a few drops of xylol often allows the speckled appearance of a wart to be distinguished from the plain transparency of a callus.

Ingrowing toenails

These are also the result of pressure, but there is a personal and sometimes an inherited factor as well. In the early stages they can

be corrected by the weekly insertion of a wisp of cotton wool under the tip of the ingrowing edge. This forms an opposing force which deflects the nail upwards. If the nail is already cutting into the nail-fold, a complete strip down the whole length of the nail must be removed under anaesthesia. The new nail should be watched carefully and pressure from the shoes rectified.

ONYCHOGRYPHOSIS

A condition of the elderly onychogryphosis consists of a thickening and distortion of the nails, which may grow to extreme lengths and bizarre shapes before the patient presents for treatment. This should consist of cutting, paring and filing from time to time Though it is tempting to remove these nails, they invariably grow again in the same way A small hacksaw is useful in removing the main bulk of nail.

Conditions due to Stasis

These are hypostatic ulcers, eczema and purpura.

Being the most dependent part of the body the foot is theoretically likely to show the effects of hypostasis first. But, as it is supported by shoes, it usually shows them far less than the lower part of the leg unless oedema and pain at the ankle leads to the wearing of slippers that do not support the foot adequately In bandaging legs suffering from hypostatic conditions, the foot and ankle must be firmly included in the bandage. The unsupported hollow below the malleoli is one of the commonest sites for hypostatic eczema, purpura and pigmentation, and it is this site which is often given inadequate support. (See chapter 42.)

Conditions due to Peripheral Mechanisms

These are symmetrical eczema (podopompholyx), hyperhidrosis, pustular bacterid.

The skin of the foot shares in these conditions, all of which affect the peripheral areas of the body The lesions are more or less symmetrical and are confined almost exclusively to the soles. The palms may be affected as well. A symmetrical pattern helps in differentiating the condition from fungus infection An important part of the management consists in resting the feet up when there is any oedema and in keeping them cool in hyperhidrotic states. Evaporation should be encouraged by the frequent use of dusting powders and not hindered by wearing rubber-soled shoes, thick socks or heavy boots. Chilblains are dealt with elsewhere.

Conditions which are part of General Skin Reactions

These include psoriasis, ringworm and contact dermatitis. A dermatitis affecting particularly the dorsal part of the feet or toes is most commonly due to

(a) the rubbing of the front of the toes when an active ringworm infection occurs between them
(b) contact dermatitis from sensitization to powders, ointments, footbaths, etc., used for other conditions
(c) as part of a more or less generalized eczema or dermatitis
(d) contact dermatitis from sensitivity to shoes, socks or stockings
(e) cement dermatitis, in which the feet and ankles are one of the sites commonly affected by cement dust.

Shoe sensitivity does not appear to be common in this country but may explain some cases of resistant eczema of the feet. It is usually due to the rubber used in the floor of the shoe, but dyes, chemicals used in tanning, the material of the lining itself the padding or the polish may be responsible. No fewer than thirty-three potential sensitizers are said to be present in a finished pair of shoes and elucidation of the offending agent may be very difficult.

VERRUCAE

These are dealt with elsewhere (see p. 134)

PIGMENTED MOLES

Pigmented moles on the soles of the feet are usually of junctional type and may become malignant. In some cases it is feasible to remove these before puberty and a dark flat mole should probably always be excised. If not, particular care should be taken to ensure that they are not the site of friction or trauma.

In tropical countries a number of other infections are commonly seen in native people, whose unshod feet are particularly subject to trauma, infections and infestations.

Signs of Vascular Disease in the Feet

These are coldness of the feet after adequate exposure at room temperature absent pulses gangrene or discolouration of the tips of the toes persistent infection of the toes and brittleness or poor growth of the nails glossiness of the skin blotchy erythema on putting the feet to the ground.

In suspected vascular disease, the greatest care must be taken to avoid infection. Careful foot hygiene should be practised and the paring of corns forbidden. Residual damage from trench feet and

severe frostbite are in the same category The feet should be kept warm and absolutely dry well powdered and not subject to extreme change of temperature—such as putting them near the fire. Shoes should be particularly well-fitting and soft, and socks evenly and smoothly darned. Blisters or any infected area should be treated by a period of rest in bed until healing is complete.

Lesions of Special Diagnostic Value on the Foot

Eczema and ringworm apart, there are two conditions which affect the soles and the palms, as well as other parts of the body where lesions are often diagnostic. In most other skin conditions these areas are spared

(*a*) Scabies

Burrows may occur on the soles of the feet. It is important not to overlook this site both in diagnosis and treatment (particularly in children)

(*b*) Syphilis

In congenital syphilis in infants a bullous eruption sometimes affects the soles and palms. In secondary syphilis these sites may also be included in the generalized eruption

CHAPTER 36

The Nursing Care of the Hair and the Scalp

Anatomy

The hair is formed of keratin, dead horny tissue arising from hair follicles which are present on the whole surface of the body except the palms, soles and glans penis. The characteristics of the hair vary in different sites. The hair-follicle is a turning-in of the epidermis extending obliquely downwards into the dermis and ending in the hair bud Each hair has a natural cycle which varies from species to species and from area to area in the body After a certain length of time (about 150 days on the human scalp) it is extruded, a new hair being formed underneath. Thus the hairs are continually being shed and replaced. A person whose attention has once been drawn to falling hair needs reassuring that a certain amount of hair-fall occurs naturally each day

The keratin molecules of which the hair consists are arranged in such a way than when it is wet the hair can be stretched considerably without breaking. During permanent waving the hair is wetted, then stretched after being curled into waves, it is fixed and dried in its new position, which it then retains.

Physiology

The hair is a vestigial organ, having lost most of the characteristics which gave it its value in animals (protection from rain, thermal insulation, defence in combat, etc.) It behaves according to the individual s genetic pattern and is controlled within these limits by the endocrine glands, notably the sex glands, the adrenal and the pituitary The axillary hair and the lower part of the pubic hair is often lost in extreme old age, liver disease and some endocrine diseases. In hypopituitarism the hair of the scalp becomes thin, lank, dry and lustreless. In Cushing's disease and virilism the hair of the body is greatly increased.

Psychological Factors

There is a strong tradition of folklore which associates hair with sexual virility Young men who lose hair and young women who have too much, both become very distressed. In addition, anxiety arising from quite other causes often becomes transferred to areas of baldness—real or imagined.

Care of the Normal Scalp

Little harm comes from neglecting the hair providing it is washed regularly As a general rule, men s hair should be washed once every week or ten days, and women s once a fortnight. In people with greasy seborrhoeic scalps, shorter intervals are necessary Brisk daily brushing, provided it is not excessive, does no harm to normal hair but middle-aged women with fine, soft hair should be warned to avoid trying to strengthen the roots in this way Excessive scalp massage serves no useful purpose.

Hair Preparations: Their value and their dangers

With the exception of black hair-dye (paraphenylenediamine) dyeing and tinting is innocuous. In the past, metallic dyes gave rise to trouble but these are no longer used. Acute cases of dermatitis still occur in this country from the use of proprietary black hair dyes. Preliminary patch-testing is often neglected, and even when carried out is not a certain indication of safety

Shampoos

There are many types of shampoos. Originally these were based on a mixture of spirit, alkali and soap powder (or soap-bark). Official spirit shampoos are of this type and are quite efficient. The advantages of adding tar oil of cade, sulphur and other additions are doubtful.

Dry shampoos were based on a mixture of borax, and alkali, oily shampoos on oil, spirit, alkali and soap New emulsifying agents have led to the creation of numerous cosmetic shampoos with a pleasant, foaming action and efficient degreasing powers. Many of these are based on sodium lauryl sulphate. A little of this powder alone can be sprinkled in the hair and lathered with warm water

Genisol shampoo (Genatosan) incorporates liquor picis carb. and an antispetic, hexachlorophene.

Selenium sulphide is incorporated in other shampoos much used, but here the instructions must be carefully followed and the finger nails scrubbed afterwards.

Cetrimide 5–10 / is a very efficient degreaser but leaves the hair dry and unmanageable. A little ung. aquosum B.P or liquid paraffin can be brushed in afterwards.

Hair Lotions and Dressings

Medicated hair lotions usually contain salicylic acid (e.g. *prescription no 15 page 259) and a varying amount of oil, perfume and* colouring. Antiseptics are sometimes included. Sensitivity reactions to these occasionally occur but such lotions are otherwise harmless and of psychological value to the patient. They cannot be expected to bring back hair that has been lost or to control any but the mildest degree of dandruff (though they may disguise its presence).

Setting lotions, permanent waving solutions and sprays are usually harmless but a patient under treatment for any scalp disease should seek medical advice before using them. They should be avoided in any eczematous or inflammatory condition, but are allowed in trichorrhoea (diffuse alopecia) and mild dandruff Dark brown and black hair-dyes are also to be avoided when any inflammatory disease is present.

Care of the Seborrhoeic Scalp

If there is persistent dandruff with some degree of irritation, not more than a few itchy papules and no secondary infection, the scalp should be smeared nightly with a mildly stimulating scalp cream containing salicylic acid and tar or sulphur A towel on the pillow will prevent staining. Every second or third night the scalp should *be washed with one or other of the shampoos mentioned in the* formulary continuing the regime until the scalp is clear of dandruff and irritation. The treatment should be repeated twice a week for the next month and once a week thereafter Relapses invariably follow neglecting these precautions.

In more severe cases the treatment is on the same lines, but the surrounding skin may also be affected and should be treated with *zinc paste with ichthyol or sulphur Infected* areas call for initial soothing and antiseptic measures—an antibiotic cream, for instance. If crusts and scabs are numerous, a boric and starch poultice is helpful, but the hair must be cropped first. The more acute the condition, the milder the treatment. In very severe cases, wet dressings or zinc cream should be used and the patient be in bed.

HAIR LOSS AND ITS MANAGEMENT

Only the common causes are considered here. Examples of hair loss (or alopecia) following obvious disease of the scalp will not be described. These are matters for the specialist. Ringworm of the scalp is discussed elsewhere.

Alopecia Areata

The condition occurs in both sexes and at all ages. The hair falls out completely in areas of varying sizes, leaving a completely smooth white scalp. Such areas of loss may be single or multiple and may also affect the beard area, eyebrows and, in extreme cases, the eyelashes and all the body hair In the great majority of cases resolution occurs naturally in the course of some months, though individual cases may remain affected for a number of years before this happens. If the patient has no previous history of similar attacks and no family history of this type of baldness, he may generally be reassured firmly at the outset that regrowth will occur Such reassurance may not always be justified in the event but is important for the patient's morale. Local treatment is entirely palliative but should be given for the same reason.

The course of the eruption and the extent of spread is in most cases unpredictable and uncontrollable. Obvious examples of ill-health, septic foci and thyrotoxicosis should be treated since these are liable to intensify or prolong the attack. Emotional stresses and personal or domestic problems are often evident and will need attention. The hair can be shampooed normally or waved and set if desired. New patches may appear but will have no relation to any cosmetic processes of this nature.

'Constitutional Hair-Loss (Trichorrhoea)

The common type of inherited male hair loss usually occurs in middle age but may start in the early twenties or even before. The pattern is characteristic, with thinning at the vertex and in the fronto-temporal notches. There may be some associated seborrhoea, which should be treated. In most cases little can be done to alter the predetermined pattern of loss that is taking place. The nature of the process should be explained to the patient, and he should be reassured that hair is continually being shed and regrown in normal health. Even though much may appear to be falling out at the moment, a considerable amount is still growing. Hair-fall tends to occur in cycles, being more prominent in the winter and spring, with

some regrowth occurring in the summer There is no evidence that the numerous advertised remedies for male baldness have any effect whatsoever but the patient should never receive from his medical adviser or nurse an abrupt dismissal without explanation. This *frequently causes him to waste his time and money seeking such a* cure —often from a bald hairdresser

It is less commonly recognized that a similar but more diffuse type of hair thinning occurs in women at or after the menopause—sometimes earlier (Plate XIV) This is never as extensive as it is in men but may give rise to even more distress. Women with fine, soft hair are particularly affected. These patients need very considerable reassurance It is probably justifiable to give some palliative treatment without the self-deception that this will be of much value. They may be allowed to seek cosmetic aids to help disguise the thinning of their hair and restore their morale and confidence. The hair that comes out with washing is loose and ready to fall. The sight of this worries patients, who should be told that it makes no difference to the ultimate result.

Temporary diffuse loss of hair may follow an illness with a protracted high fever It recovers in three months. Considerable thinning may also follow childbirth and is probably endocrine in origin. The return of hair is less predictable in these cases.

'Massage Alopecia

Too vigorous rubbing, in an attempt to stimulate growth may lead to a patch of broken hair which becomes more and more marked. This leads to even more vigorous rubbing and further loss. These patches occur in the front and usually to one side of the scalp. (Plate XV)

Diseases of the Hair Shaft

There are a number of diseases affecting the shaft of the hair In some of these the hair shows a marked tendency to split and fragment in others little nodes occur along the hair which ruptures easily leaving a brush-like end in others the hair becomes twisted in its axis. In all these conditions vigorous brushing, permanent waving and any traumatic procedure will cause the hairs to break more easily The diagnosis of these conditions rests with the specialist.

Other Rare Causes of Hair Loss

These may be associated with incomplete development of the ectoderm involving the nails and teeth, a habit of pulling or

rubbing in children (see Plate XIII), or endocrine disorders (*q v*) such as myxoedema. The management depends upon recognition of the cause and its appropriate treatment, if any

Cosmetic Advice

All women suffering from hair-loss are extremely sensitive about this. Whereas effective therapy is often limited, advice on the cosmetic aspect is appreciated and often of considerable help in bringing the patient to terms with her condition. It should not be neglected by the doctor or nurse to whom enquiries are directed. There are a number of excellent shampoos on the market which may be used with safety Medicated shampoos are on the whole best avoided unless some condition of the scalp such as seborrhoea, exists. Brushing should never be too vigorous and the patient should pay due attention to maintaining good general health, adequate nutrition and plenty of rest. Fibro-massage, local ultra violet light, tonic applications and other forms of treatment are mentioned only to be dismissed as useless.

Temperature Frostbite occurs from exposure to very low temperatures. All the other effects of cold are fundamentally dependent on low temperatures.

Moisture cools the skin by evaporation, and thus intensifies the effect of cold.

Convection currents Draughts and winds cause evaporation and carry away the surrounding protection of warm air on the surface of the skin. These are prevalent in old houses with open coal fires and ill-fitting doors, and in offices, schools and shops.

Clothing Chilblains of the legs occur more readily with short skirts and thin stockings and are always improved by wearing slacks and high fur boots.

Friction and pressure Chilblains on the feet and heels occur at sites of pressure or friction from ill-fitting shoes.

Constitutional factors Subcutaneous fat insulates the skin from the main body-heat, and obesity thus increases the vulnerability to chilblains—particularly in the legs. Starvation and under-nutrition also provoke chilblains, though this may be due to concomitant lack of clothing and poor housing conditions.

Types of Reaction to Cold

FROSTBITE

This occurs in patients with healthy arteries under conditions of extreme and prolonged cold. In severe cases the tissues are killed and gangrene follows (Plate X) conditions of abnormal exposure to cold, or in patients with arteriosclerosis in severe winters.

Management consists in removing the patient from the causative environment, keeping him warm, and *not applying any heat directly to the affected area*. Alcohol may be given internally as a first-aid measure—vasodilators later The affected part is allowed to thaw from the cold *slowly* The severe inflammatory condition that occurs is extremely painful and the areas may become infected. The part should be kept dry and reasonably warm. Electric blankets on the thighs or belly increase vasodilatation in the legs.

TRENCH-FOOT

Here, cold is associated with damp and secondary infection. The process is slower but similar in its effect to frostbite.

CHILBLAINS

These occur

(*a*) on the fingers or feet

(*b*) on the heels and ankle, particularly on site of pressure from loose shoes

(*c*) on the backs of the legs (see erythrocyanosis below)

(*d*) on the ears, nose and other exposed parts.

Chilblains are due essentially to arteriolar spasm and anoxaemia. In susceptible subjects peripheral vasoconstriction occurs with great ease.

Management of chilblains

Make sure the patient's general body clothing is warm and adequate, and that he has protected his legs and hands adequately before he goes outside the house.

Make sure that the patient's house is equally warmed throughout and free from draughts. Loose-fitting doors and windows should be attended to and damp stone floors covered. Slow-burning grates reduce the need for draughts.

Correct any ill-fitting shoes that cause pressure or friction.

Alter any working conditions that involve draughts or the constant handling of cold metal objects.

In brief the answer to chilblains and erythrocyanosis lies in

1 Loose, warm clothing with covered or tapered ends (i.e. skiing-type slacks, jerseys, gloves of adequate length, wind-cheaters —*not* tight clothing.

2. Improvement of the medieval systems of house-heating still prevalent and a change from the traditional native love of draughts of cold, damp air

ERYTHROCYANOSIS

This name is given to the purplish, cold discolouration of the lower part of the leg that occurs in young women (and some middle-aged women) It is particularly seen in those with a susceptible vascular system who prefer the whims of fashion to adequate clothing. It also occurs severely in patients with limbs paralysed by poliomyelitis and spinal disease. In extreme cases the distinctive bluish areas extend up the leg in the form of pink chilblains. The hair follicles of the leg show a bluish congestion. Chilblains are usually not present elsewhere.

Management of erythrocyanosis

The only answer lies in adequate clothing. Local measures (apart from elastic stockings or bandaging) are useless vasodilating drugs of little value. Sympathectomy is of some use in severe cases associated

with ulceration and pain but this seldom occurs. Draughts must be eliminated and the patient should be encouraged to wear slacks, high fur-lined boots or thick stockings Elastic stockings or even elasticized nylon stockings are of some value.

RAYNAUD'S PHENOMENON

This consists of a spasm of the arterioles of the fingers under conditions of cold. There is a familial and personal susceptibility In severe cases atrophy and destruction of the finger-tips occurs. Here, sympathectomy is indicated. Vasodilating drugs have some value if given in sufficient strength, but the inconstant nature of the phenomenon makes such control difficult and the patient soon learns to avoid these factors which cause the spasm or to ignore it when it occurs. Occasionally Raynaud's phenomenon may precede the onset of scleroderma by many years.

SPRING ERUPTION OF THE EARS

Attention has recently been drawn to a common eruption occurring in boys in the spring. The patients often have rather outstanding ears. Girls are less commonly affected because of their long hair In the early days of spring, when a bright sun is associated with cold winds, a blistering eruption occurs on the tips of the ears which gradually subsides in the succeeding weeks. (Plate XI.) It may be associated with an erythema multiforme like rash on the hands or elsewhere. A thick layer of grease or a wide cap gives some protection. The condition usually recurs for several years but eventually ceases.

CHAPTER 38

Steroid Therapy
Control and Dangers

The advent of A.C.T.H. and cortisone has revolutionized the treatment of dermatological conditions. It may eventually be found that the value of these agents is greater in this field than in any other. But they are not, as is sometimes thought, universal panaceas for all the ills the skin is heir to. Though immensely valuable, their use is limited.

A.C.T.H. and cortisone suppress the reactions of the tissues that arise in response to stress situations. In certain acute conditions, such as drug eruptions and contact dermatitis, these tissue changes (which constitute the visible disease) rise to a peak and then slowly recede. Steroid therapy is of value here in suppressing the severity of the peak of this reaction, and helping the patient through this period with less discomfort. Conditions in which such a natural peak occurs form a group to which steroid therapy is justifiable.

A second group consists of certain severe or lethal conditions: *pemphigus, exfoliative dermatitis and disseminate (acute) lupus erythematosus*. In the past, patients with pemphigus usually died of the disease: those with acute lupus always did so—though they might survive repeated exacerbations for many years. The great value of A.C.T.H. and cortisone in these conditions lies in lessening the severity of exacerbations and protecting the patient until a natural remission takes place.

Cortisone and A.C.T.H. are without value in conditions that have no natural peak but which are gradually progressive—such as *scleroderma*—or those that follow a pattern of repeated irregular exacerbations over long periods and are yet not harmful to life—such as *psoriasis*.

Certain features of this treatment should be understood by the nurse who is in charge of patients under steroid therapy.

First, she must know the types of drug available. Next, she must know the common side-effects and the reactions that may occur

Finally she must know what essential investigations and procedures are used in the control of treatment.

Drugs Available

Cortisone can either be given in the form of an injection (25 mg. per cc.) twice or three times a day or by tablets 25 mg. each.

Delta-hydrocortisone (*Prednisolone*) (5 mg. tablets) is replacing cortisone, to which it is roughly equivalent in dose, tablet for tablet.

A.C.T.H. can be given in various forms

1. Intravenously in 1 pint of dextrose-saline, given slowly over six hours. Daily 12 5–25 units are given, and the treatment is repeated, on alternate days, or perhaps only twice a week.
2. By intramuscular injection of the soluble salt, 20–60 units twice a day according to the disease.
3. As long-acting A.C.T.H.-gel, once a day in the same doses.

The ultimate effect of these is broadly the same. A.C.T H. stimulates the patient's own adrenal gland to produce cortisone. Cortisone, on the other hand, if given for a long period, inhibits the patient's own powers of adrenal secretion. All patients who have had cortisone in hospital for any period over a fortnight, and particularly those that are on maintenance doses, should inform their doctors and relatives of this. If a surgical procedure becomes necessary for any reason, cortisone must be increased, or post-operative collapse may occur due to the adrenal gland suppression that this drug has brought about. *This also applies to acute infections.*

CONTRA-INDICATIONS

A.C.T.H. and cortisone should not be given to patients with chronic nephritis, cardiac failure, known tuberculosis, peptic ulceration, diabetes and marked hypertension. It should be given with extreme care in old patients with osteoporosis and in those with a past history of peptic ulcerations.

SIDE-EFFECTS

These are numerous and often serious.

Water-retention occurs due to changes in the sodium and potassium balance. This is less marked with Prednisolone. *Watch for oedema.*

Moon-face and the gradual development of Cushing's syndrome. Not in itself serious.

Lowered serum potassium, if not corrected by administration of potassium salts daily may lead to sudden cardiac arrest. *No premonitory signs.* Risk much less with Prednisolone.

Raised blood-pressure Variable in amount. Check the level twice a week.

Spread of infection. Particularly latent tuberculosis. A major risk in cases of acute lupus. Watch for changes in type of temperature, loss of weight and general worsening of the patient's condition. Other infection, on the skin and elsewhere, may spread without giving rise to any tissue reaction and therefore few signs.

Thrombosis In patients on high doses. May present with pain in calf or as a pulmonary embolism.

Diabetes Glycosuria may occur This is reversible. Latent or mild diabetes becomes more marked.

Mental changes Some patients develop signs of mental instability or become frankly psychotic.

Osteoporosis and fractures Gradual decalcification of the bones takes place and fracture of a vertebra is not uncommon in patients on prolonged dosage. *Watch for complaints of bone pain or girdle pain.*

Control Investigations

Temperature chart Any rise in temperature should be reported immediately Infections are easily missed owing to the suppressive effect of steroids in inflammatory reactions.

Urine This should be tested for albumin and sugar and regular specimens taken in patients on prolonged dosage.

X-ray of chest Should be taken at intervals in patients on prolonged dosage

Serum sodium and potassium levels When any renal, hepatic or cardiac disease is present, the electrolyte balance must be watched carefully

THE LOCAL USE OF HYDROCORTISONE

Hydrocortisone brings about the suppression of superficial tissue reactions at the site of application. It is available as a 1% or 2 5% ointment and ½% and 1% lotion and also as a pressure-spray which is *particularly useful for in-patient treatment.* (See Appendix I page 265.) When correctly used, it has a marked effect in reducing the intensity of acute tissue changes and in allaying irritation. Though not curative, it may cut short the course of an eruption by preventing secondary changes due to rubbing and scratching.

There is a great temptation to use hydrocortisone for all and every type of skin disease. This is illogical and may be harmful.

Hydrocortisone is an expensive drug and likely to remain so Its indiscriminate use is equivalent to the giving of morphia or other sedatives for all types of pain without attempting first to discover and remove the cause

The following criteria should be satisfied

1 An accurate diagnosis should be made before hydrocortisone is prescribed. It is not enough, for instance, to diagnose pruritus vulvae and prescribe the ointment, unless such causative conditions as diabetes and vaginal and urinary infections are excluded.
2. The areas treated should be sufficiently small to enable the ointment to be used economically Extensive areas of eczema may improve just as well on simple zinc cream the difference in cost is proportionately much greater for larger areas than for small. It is, in fact, most effective when used for conditions that are extremely localized, and much less so for more extensive eruptions.
3 It is of no value in non-irritating conditions that have no natural peak e.g. psoriasis, lichen planus, acne.

Method of Use

The patient should be told to apply very little of the ointment or lotion with the finger tip, twice a day at first, then once a day and then perhaps on alternate days before it is finally discontinued. No other therapy is required. Hydrocortisone alone should not be given to conditions where an infective element is present. By suppressing the reaction of the skin the infection is allowed to extend. This does not apply to combinations of hydrocortisone and antibiotics with which a rather larger field of conditions may be treated i.e sycosis, infective eczema.

In practice, it is found that hydrocortisone ointment is

VERY USEFUL IN

1 Anogenital pruritus with lichenification.
2. Localized eczema of the ears and eyelids (neurodermatitis)
3 Localized forms of acute contact dermatitis.

MODERATELY USEFUL IN

1 Localized forms of seborrhoeic eczema and nummular eczema —though recurrence is likely when it is left off
2. Small patches of lichen simplex.

3 Chronic superficial dermatitis of the face and eczema of the lips.
4 Recurrent herpes simplex.

OF LITTLE OR NO VALUE IN

1 Purely infective conditions.
2 Chronic forms of eczema.
3 Alopecia areata.
4 Acne.
5 Drug eruptions.

Do not send a patient to the dermatologist for diagnosis when the appearance of the eruption is being suppressed by hydrocortisone ointment

Cardinal diagnostic features may be just as much obscured as those of acute abdominal pain treated with morphia.

CHAPTER 39

An Eruption that is not doing well

An eruption that is not clearing as well as expected from general experience of the disease in question should arouse the following suspicions

Drug Eruption

This may arise insidiously during the course of treatment and may not be attributed to drug sensitivity until it has fully developed. A common instance is the onset of a barbiturate rash during the sedation of a patient suffering from some form of eczema.

Dermatitis Venenata

This may be due to local treatment. Sensitivity may occur to almost any application prescribed by the doctor or by the patient himself Patients may sometimes be persuaded by relatives to apply another ointment to speed things up

Errors of Technique

This may occur in applying dressings and bandages. A Viscopaste bandage that is constricting a limb a blue-line bandage that has been applied tightly and is nipping the ankle gauze or lint that sticks to exuding areas.

An Unrecognized Sensitivity to Flowers or Perfume

A patient in hospital is brought flowers by relatives. Perfume, scent and other cosmetics intensify a dermatitis due to them in the first instance or to other agents containing similar sensitizers. Cross-sensitization is sometimes overlooked.

The Presence of Other Illnesses

For example, the patient with exfoliative dermatitis and gross liver failure or anaemia who becomes progressively worse, despite adequate treatment to the skin the patient with hypostatic eczema with persistent oedema of the legs due to concomitant heart failure.

Psychological Factors

The presence of environmental or personal difficulties and conflicts. These are often responsible for sudden relapses immediately on returning home from hospital, and unexpected exacerbations after visits by relatives. An eruption that has persistently defied adequate treatment may suddenly clear up with a change in the domestic situation.

There are a small group of patients who give the impression of unconsciously refusing to get better These may go as far as producing a true dermatitis artefacta on the skin, but are more likely to point with undisguised pride to an extension of the eruption and its failure to heal under intensive treatment. The more discomforted the nurse and physician, the more pleased the patient. The patient who is obviously gratified at being an unique case whose complexities baffle his physician, is filling a void in his emotional life. There is a limit to the endurance of the nursing staff when faced with this particular problem, and once this state of rejection of cure is recognized, no good purpose is served by continuing with treatment the aid of the psychiatrists should be invoked.

CHAPTER 40

Some Special Aspects of Skin Nursing

OUT-PATIENT NURSE

The nurse in charge of a dermatological out patient clinic should have a working knowledge of the practical basis of dermatological management and treatment, and certain essential qualities.

Enthusiasm and Optimistic Outlook

The patient should feel that he is in the care of a cheerful and friendly Sister or nurse who does not regard his skin disease with revulsion or fear She should be confident and optimistic in her handling of the patient and firm and assured when carrying out dressings. The nurse s knowledge will increase with experience at the clinic in proportion to her interest and enthusiasm.

Organizing Ability

The number of patients attending a dermatological clinic is usually large. Some of these can be seen and dismissed fairly quickly but many need to be fully undressed. It is important for the nurse in charge to know which patients fall into the latter category It is not enough to ask the patient if he has spots elsewhere. If he suffers from any condition that is liable to be widespread (such as eczema), he should automatically be asked to undress and shown into a cubicle. Limited cubicle space and a number of patients usually seen, make it essential that the nurse should be able to keep all the spaces in the clinic filled so that the flow can be uninterrupted. A great deal of time can be wasted by having to send a patient from a chair to a cubicle half way through an examination. In dermatology a brief history-taking is followed by examination, and this is followed by a further detailed history—the reverse order to that in general medicine.

The out-patient nurse must take an interest in acquiring that special knowledge of skin techniques which will be necessary in

dealing with skin patients in the clinic. She must know how to make a starch poultice, instruct a patient on the composition of wet dressings, apply occlusive bandages and carry out patch-tests and she must impart this knowledge to her junior staff.

She should understand when practical procedures and techniques are likely to be carried out—the application of caustics, examination of scales for ringworm, superficial curettage—and should have the apparatus ready

She should know how to set up and turn out the Wood's light apparatus. This has to warm up before it is effective and must be allowed to cool down before further use The smooth running of a clinic may be dislocated by failing to appreciate this.

She should have enough initiative to carry out simple procedures, such as treating warts with carbon dioxide snow She should be able to evaluate the results, e.g. to assess the length of time necessary for different types of warts, so that treatment is reduced to a minimum and successful cure obtained as often as possible. If a treatment clinic grows up as an adjunct to a dermatological out-patient department, she should know how far the routine prescribed treatment should be continued before referring cases back to the dermatologist or his assistants, and when progress is slower than [illegible] be expected. This knowledge will come with experience, but [illegible] accumulation of such experience and the ability to put it [illegible] practice depends greatly on the initiative and enthusiasm of the [illegible] in charge. If these routine treatments can be carried out in a [illegible] clinic in her charge, the main consultant clinic can be kept free of a large number of old patients re-attending for the removal of [illegible] the clipping of blisters and other minor procedures.

She must, in some hospitals, arrange to collect patho[illegible] results, see that specimens are sent off, and make necessary [illegible] ments for the patient to attend for minor operations, radio[illegible] etc. In most large hospitals these duties are carried out—[illegible] should be—by secretaries.

THE CHILDREN'S NURSE

Infant's Nurse

Though the nursing of infants usually falls to the [illegible] the disorders affecting the skins of young babies, as [illegible] older children, will continually confront the District [illegible] ever she works. These disorders are discussed in the [illegible] The

Infant's Skin. The following remarks, of a more general nature, are meant to indicate the practical side of the problem in the context of her everyday work.

NAEVOID AND CONGENITAL CONDITIONS

A great variety of naevoid abnormalities can be present on the skin of the newborn baby most of them small and unimportant. Extensive congenital conditions are sometimes lethal. If these run in families the nurse may be forewarned but most such serious abnormalities are carried in recessive genes, and are unlikely to show in the family history Less severe congenital and developmental abnormalities of this type may present at birth or soon after Any abnormality that is not (*a*) lethal, (*b*) obviously affecting or likely to affect the development of the child, or (*c*) very extensive, *should be treated as lightly as possible and the mother* reassured. The rare conditions in which the newborn baby shows an exfoliation of the skin are discussed elsewhere. These babies must be kept warm and the doctor called immediately It is not always possible to give an immediate prognosis—in some varieties the infants are likely to die. But if they survive the first week, the condition usually improves steadily These babies are unpleasant to look at and the mother should slowly and gently be brought to realize that her baby has a generalized inflammation of the skin which will steadily improve if she can help him over the first few weeks. In this way a stimulus is provided to maternal care and feeding. On no account should the mother be frightened or unduly worried. The baby should be breast fed wherever possible.

NEONATAL INFECTION

Sepsis is nowadays usually confined to the umbilical cord, the *folds of the finger-nails or the napkin area. If more than the occa*sional case of neonatal infection occurs in a maternity unit, a search should be made for nasal staphylococcal carriers among the nurses. Babies nursed entirely by their mothers do not develop neonatal sepsis as often as those nursed communally

GENERAL PRECAUTIONS FOR AN INFANT'S SKIN SHOWING SIGNS OF ROUGHNESS OR PEELING

The skin should not be washed with soap. Plain dusting powder (without boric acid) may be applied liberally and nut oil or soft water used for cleansing. If early signs of a napkin rash are noticed, napkins should be left off and treatment with bland creams started. (See Chapter 18)

Nursing the Young Child

The conditions most likely to be seen in children's beds at hospital are infantile eczema, napkin rashes, psoriasis, papular urticaria and impetigo. Ringworm, either of the cattle variety or of the scalp, is sometimes admitted. The only two conditions which are infectious are impetigo (before treatment) and ringworm of the scalp These conditions are described elsewhere. In general, the nursing of the sick child with a skin condition demands a high degree of patience and efficiency and some knowledge of the routines of skin treatment. The older child is particularly likely to be conscious of his disability among his fellow children and needs considerable attention and sympathy in the early stages of his stay Every effort must be made to let him feel that he can mix with other children and to get the other children to accept him. This is of great importance in infantile eczema and psoriasis. Sufficient time must be put aside for thorough treatment without haste, once or twice a day After this is over the child should be encouraged to join in all the activities of the others. Nocturnal bouts of irritation may be troublesome, and from his apprehension of going to bed, sleep may be disturbed. A little time put aside in the evening for carrying out treatment and then sitting with the child, talking or reading to him until he goes to sleep is well worth while, particularly in the early days of his stay in hospital.

Babies with infantile eczema may very rarely develop hyper pyrexia while in hospital. This usually occurs in the first few days of stay and must be treated as an emergency It appears to be due to a temporary failure of the temperature-regulating centre and of vaso-motor control. The condition may be rapidly fatal. Where no infec tion can be demonstrated, treatment with cortisone has in recent years proved life-saving. Tepid sponging is started if the typical sudden high fever is detected and the temperature is recorded every half-hour A doctor should be called immediately

There are certain other skin disorders with whose pattern the nurse should be familiar

DERMATITIS FROM IRRITANTS

Fair-skinned children wearing clothes too large or too small for them may develop patches of chafing. Contact, with sand, cement, Plasticine, chalk, or even soap, can cause areas of skin breakdown. The patterns of various types of contact dermatitis are important (the distinctive area on the buttocks from polish, disinfectant or the

Acne

This appears about puberty and continues throughout adolescence. School nurses are not always sufficiently sympathetic about this problem, which often receives scant attention. In sensitive children it can be the cause of much inward suffering and embarrassment. Even if treatment is not given, the matron should be prepared to explain its nature and give sensible general advice about it. Reassurance alone may help by reducing the very considerable tension that can be associated with this condition, especially in girls of fifteen and sixteen when personal appearances begin to matter so much and every spot is magnified by the imagination to twice its real size.

THE FACTORY AND INDUSTRIAL NURSE

The nurse in charge of a factory sick bay holds a very responsible position In the larger factories she will work with a Medical Officer attached to the firm. In smaller factories, visits of the Medical Officer may be less frequent and a nurse alone be in charge. Her primary duty is, of course, to deal with casualties and to give first-aid measures for any injuries and accidents occurring at work. She may also be called upon to carry out daily dressings for boils, cuts, and wounds, whether sustained at work or not, and also to detect early signs of illness among workers.

But the experienced factory nurse will have a wider scope than this. By her knowledge of the people and the processes in the factory she will gain a close knowledge of the hazards attending any particular industry and be able to detect at an early stage any skin break downs due to these. She may by her position and influence, be able to encourage prophylactic measures and educate the workers in the best way to avoid the effects of irritants and sensitizing agents. She may be able to detect the adverse effect of any new industrial process on the skin. In the course of time she will probably get to know a good deal about the lives, hobbies and idiosyncrasies of the workers and how these may be affecting the course of *a dermatitis. By giving sympathy and reassurance* she will be able to do much towards helping recovery where this is unduly delayed. She may know of some difficulty in personal relationships or working conditions that can be helped by appropriate measures.

As far as the skin is concerned, the industrial nurse should remember the following points

1 Not all skin diseases on the hands are industrial dermatitis.

An eczematous eruption may occur following ringworm of the feet, or as part of various constitutional diseases. Dermatitis may also be caused by the irritant effect of hobbies, house-painting, sensitivity to flowers and plants, etc. She must be careful, therefore, not to use the term industrial dermatitis to the worker unless the diagnosis has been given by a doctor

2. First-aid or initial treatment to acute eczematous conditions follows routine lines She should not apply any complex lotions, ointments or antispetics and should make sure the worker reports the condition to his own doctor

3 Cuts and injuries should be treated with antiseptics of a low sensitizing power It often inadvertently happens that a sensitization rash occurs from ill-advised treatment at first-aid centres. This should be regarded as a disaster since it may result in the worker being off sick for several weeks. The occasional sensitivity to iodine and plaster should be remembered.

The worker with a skin disease, other than one affecting his hands, should be encouraged to keep at work whenever possible. The nurse may do much in helping to meet and answer any objections of his fellow-workers, who may feel he is liable to contaminate them. She is, in fact, in a very strong position to spread at all times an informed and sensible attitude to skin disease among groups of people who often have very deeply ingrained prejudices and misconceptions about it.

Bandaging

Tubular gauze bandaging such as Tubegauz will be found of great service in dressing minor cuts and abrasions occurring in the course of work. Suitable first-aid skin applications which should be stocked in a large factory are

(a) For acute cases of eczema and dermatitis
Zinc cream, oily calamine lotion nut oil and liquid paraffin for cleaning potassium permanganate crystals for bathing ung. aquosum as cold cream.

(b) For infected eczematous conditions and wounds
Zinc cream with ½% gentian violet.

(c) Antiseptic applications with low sensitizing powers
Gentian violet or brilliant green, 1% in spirit tinct. merthiolate. Vioform Sterosan or Bruladine creams Graneodin or neomycin ointments (if antibiotics required).

Substances to be Avoided

Sulphonamide and penicillin ointments and powders other antibiotic ointments unless prescribed by the doctor

The nurse employed at the larger factory and mine, where baths and showers are provided, should be conversant with the chapter on tinea infection She may be called upon to give routine treatment in ringworm of the feet and to do what she can to instil precepts of prophylaxis by encouraging the workers to keep their own shoes and towels and to avoid standing or walking about in shower rooms with bare feet. (See also School Nurse, page 206)

NOTE The definition of industrial dermatitis is given in No 24b of the Prescribed Diseases for Industrial Compensation as Inflammation or ulceration of the skin or of the mucous membrane of the upper respiratory passages or mouth produced by dust, liquid or vapour (including the condition known as chlor-acne but excluding chrome ulceration)

PROTECTION OF THE NURSE'S SKIN

The nurse who looks after patients with skin disease is in less danger of becoming infected than in many other branches of nursing. The contagious skin diseases are few and those depend upon prolonged contact. The hands are better protected against general nursing irritants by the constant use of creams, pastes and oils. The nurse should not feel it necessary to wash vigorously between each dressing Continual removal of the protective sebum by alkalis makes the skin more vulnerable to chapping, chafing and superficial infection. The dermatological nurse is, in fact, better protected than the surgical nurse, whose hands are frequently in antiseptics, sterilizing solutions and detergents.

Some applications that she uses, however do need to be removed for example, dithranol and coal tar

The following applications will be found useful in the course of her work

EMULSIFYING OINTMENT B.P

This is used to emulsify pastes and greasy ointments and can be used to remove these from the hands. After smearing it well into the skin, it is cleaned off with a piece of rag or linen soaked in oil or by running under water

BARRIER CREAMS

If the hands are dry and skin of fair, soft texture, a barrier cream should be used in the morning before work, and on occasions during the day Barrier creams are made by many firms and a protective tragacanth hand lotion is provided in most hospitals.

A LANOLIN SKIN CREAM

This can be used at night if the skin of the hands is rough or dry

See appendix (end of formulary page 265) for these prescriptions.

The very rare Norwegian scabies is the only type of scabies infectious to nurses this is seldom seen outside mental hospitals. Warts are sometimes transmitted through frequent handling. Ringworm of the scalp is so rare in adults that its infectivity can be dismissed.

Sensitization Reactions

Applicable to all nurses Nurses who handle penicillin, streptomycin and chlorpromazine are liable to develop sensitization rashes. They are not common, but when they do occur are very troublesome.

Recent Ministry of Health regulations have laid down a procedure for avoiding contact while injecting these. Strict observance of these rules would materially reduce the risk.

Sensitizations develop abruptly and at any time in a nurse's career Areas of contact on the fingers and hands are affected. The face, especially the eyelids, may itch and swell before signs appear on the hands.

Once sensitization has occurred, the slightest contact with the substance responsible will cause a relapse. This is particularly the case with chlorpromazine (Largactil) Here, sensitivity occurs when the drug is given by injection or by crushed tablets, but not when given in tablet form. Severe relapses occur even from washing the glasses in which the crushed tablets are taken.

Desensitization

This has been shown to be possible, but it involves a long and tedious series of injections. It is not yet certain how long or securely *desensitization lasts.*

CHAPTER 41

Local Applications and Dressings

BORIC AND STARCH POULTICE

Ingredients

Boric acid powder 1 teaspoonful (1 dr.)
Starch (Amylum B.P.) 2 tablespoonfuls (1 oz.)
(Cornflour will do in an emergency.)

Indications

Crusted and infected lesions, particularly on the face and scalp. Especially useful in impetigo and infected eczema of the scalp.

Technique

Preparation. Mix well and stir with a little cold water to make a paste: add boiling water to one pint and continue stirring. Allow to set in a basin. When cool and of the consistency of blancmange, smear *thickly* into a strip of unbleached linen or clean cotton rag and apply to the affected area.

Application. Hold the poultice firmly in position with a loose bandage, Tubegauz or tapes and leave on an hour or two. Remove, wiping away any exudate and softened crusts. Repeat as necessary.

WET DRESSINGS

Ingredients

A number of substances have been used for wet dressings. Among the most common are:

- Potassium permanganate as a pink solution (1 in 4000–8000).
- Burow's solution (liquor aluminium acetate)—diluted 1 in 8.
- Normal saline (one teaspoonful of salt to a pint of water).
- Dalibour water—diluted 1 in 5.
- Sodium citrate, 3.4%. (An official buffered solution of this is available.)
- Silver nitrate, ¼–½%.

Indications

Acute inflammatory conditions of the skin, particularly acute contact dermatitis and the acute stages of eczema or where there is much exudation and erythema. Wet dressings have a cooling and evaporating effect and absorb serous exudate without causing drying or cracking—provided they are kept damp

Layers of cotton or unstarched linen are best for this purpose, though gauze may be used if these are unobtainable. Lint, cotton wool and heavy coverings should be avoided. Jaconet must not be used. Constant closed irrigation (i.e. the Bunyon bag method of surgical wet dressings) has little application in dermatology

Technique

This must be followed carefully If used at home, the procedure should be explained to the patient or a relative.

1. Layers of dressing are soaked in the solution to be used, which is either cold or comfortably cool.
2. These are wrung out gently but left damp.
3. They are placed over the affected part and covered lightly with a hand towel or other loose protection to keep them in place.
4. The outer layers are damped again frequently to prevent their drying out. The whole dressing need not be changed for some hours unless there is much exudate.
5. The dressings can usually be boiled and used again.
6. The solution can be kept in a basin beside the patient but potassium permanganate must be prepared freshly every hour or two if it is to retain its oxidizing power

METHOD OF USE OF LOCAL APPLICATIONS

Details of particular techniques, such as wet dressings and poultices, are found in their appropriate headings. This chapter offers general guidance on the principles of applications of lotions, creams and pastes to the skin.

Lotions

These are either used as wet dressings (*q v*) or dabbed on abundantly and frequently to the affected area. Light linen or rag coverings are used if required. Lotions made up of spirit or containing astringents are applied sparingly and less frequently Tinctures are painted on thickly and allowed to dry repeating this once or twice a day Varnishes are usually left on for a longer period. Oily lotions are applied rather as creams than as watery applications.

Creams and Emulsions

These are also applied abundantly and in a thick layer to the skin. They may need to be repeated three or four times a day and should only be loosely covered by dressings. Gauze is a useless dressing, since cream will seep through the mesh. Lint is also to be condemned wholeheartedly as a dressing for skin conditions. Strips of rag or linen, or loose sleeve dressings on limbs, are ideal. Creams are cleaned off the skin with nut oil (see below). Dispense 4–6 ounces.

Ointments and Pastes

Ointments are rubbed in, but pastes are designed to protect and should be smeared on thickly They are best applied with a sliver of wood, a tongue depressor or the back of a wooden spoon, and cannot be applied too thickly If the paste contains a strong ingredient such as dithranol, it may be necessary to protect the surrounding skin with a bland application. Pastes may also be smeared on rag or linen and this placed on the skin. Drying pastes, however must be placed directly on to the skin, where they form a protective crust which is allowed to crumble in its own time. Cooling pastes, being thinner need to be applied more frequently

PODOPHYLLIN

This must always be painted carefully on to the lesions, the surrounding skin being protected by yellow soft paraffin. It should only be repeated, if at all, at intervals of four to five days.

Cleansing

Nut oil (arachis oil) is the best and cheapest agent for cleaning the skin Liquid paraffin is next best. It is unnecessary to buy olive oil for this purpose. Lotions may be cleaned off with soft water or cetrimide 1%, but the use of the latter as a standard cleaning agent is to be avoided in view of its degreasing properties. Cleaning should always be gentle. A great deal of damage can be done, for instance, by assiduously trying to remove all traces of a paste from an eczematous skin.

Emulsifying ointment B.P is useful to soften pastes and greasy-base ointments before cleaning with water particularly in the scalp.

Gentian violet, when applied as a lotion to an area of eczema, should not be removed, but another layer added each day until the natural peeling takes place.

Extensive Dressings in Skin Disease

On occasions, large areas of the body may need covering with

creams or lotions. When this is so or where the application stains clothing, loose bags of linen, old shirts, blouses, pyjamas or Tubegauz are used. (Plate XXVII.)

AURAL APPLICATIONS

Infections of the external canal of the ear and infective eczema of the ear are extremely troublesome conditions to deal with. Careful daily treatment is essential, whatever therapy is used. The application of medicaments should be preceded by very gentle dry-cleaning with a wool-tipped orange-stick. This removes debris and discharge without damaging or irritating the canal. The wool tip should be thin with a loose twist left projecting beyond the end of the orange-stick. Dry-cleaning should be performed under direct vision with an auriscope and carried out by a doctor or trained nurse. Repeated trauma, through inexperience of the nurse or excessive rubbing by the patient, is responsible for much chronic external otitis. If there is associated seborrhoea of the surrounding skin or scalp, this must be treated at the same time.

Applications

Drops. These may be antibiotic, mercurial, or astringent. They should be allowed to trickle in gently and not be dropped from a height, like stones into a well.

Wicks. For the acute stage of infections, particularly where there is oedema of the walls, glycerine and ichthyol wicks may be advised for later stages, aluminium subacetate or zinc sulphate. Insert the ribbon-gauze gently and avoid damaging the wall. The wicks are changed after an interval that varies with the degree of discharge and inflammation present.

Paints. Of these, gentian violet 1–2% in 50–70% spirit is probably the most useful. After the initial dry-clean, this is painted carefully round the walls with a wool-tipped orange-stick and allowed to dry. Repeat daily until the paint flakes away.

TUBULAR GAUZE BANDAGING

A new type of bandaging that has come on the market in recent years has led to considerable changes in the technique of skin dressings.

This bandaging consists of a fine, tubular cotton gauze, made in different sizes from finger to body width and either applied loosely as it is, or twisted on firmly by the use of special applicators

It is thinner in texture than plaster stockinet, but otherwise similar It is the use of the applicators which has given this bandaging a particular value in the control of bleeding, but it is used in dermatology for the most part as a simple dressing.

The bandaging is marketed under the name of Tubegauz. Details are given in the Appendix.

Uses

1 Twisted in firmly with the applicators, as a dressing for fingers after nail avulsion or the removal of warts.

2. Applied as it is to hold pads or dressings in place—on the feet or legs, for instance. (Plate XXIII.)

3 Applied to form a mask or cap for children in the treatment of eczema or impetigo of the face and scalp With experience a cap can be made that will stay in place some days during the period of hair-fall after ringworm epilation of the scalp.

4 Its main use is for general dressing of the limbs and trunk in eczema, psoriasis and other diseases needing the widespread application of creams or pastes. A whole suit of underclothing can be constructed to cover all treated areas. (Plate XXV) The ends of the tubes are either tethered to each other by tying or tapes, or they are fixed by splitting and tying or by a piece of adhesive zinc oxide plaster (Plate XXVII) When the prevention of scratching is important—as in infantile eczema—the distal end of the tube is twisted on the applicator and turned back on itself thus forming a closed bag beyond the end of the fingers. This is often an adequate substitution for splinting.

5. As a covering over occlusive paste bandages. (Plate XXI) It forms a neat over-dressing which improves the appearance and makes these more acceptable to the patient (especially coal-tar bandages).

6 Applied with the applicator it is one form of supporting bandage for the legs (see next chapter)

7 If a strip of the smallest-calibre ('01") Tubegauz is applied, unopened, beneath occlusive or plaster bandages, these may be cut off more easily by running one blade of the scissors down the tube, instead of repeatedly separating the skin from the bandage. (Plate XXI (*a*), (*b*), (*c*) and (*d*))

Advantages

It is cool and light and well tolerated even in hot weather

It may be applied loosely or as tightly as required.

It may be manipulated to construct masks, helmets and caps.
It can be replaced, and, indeed, used two or three times if necessary
In this way it is much less expensive than bandages.
It is easily removed for observation or for changing applications beneath.
It avoids the time-consuming and wasteful winding-on of bandages.
It does not ruck up and constrict joints and flexures, as bandages do unless applied very carefully and changed frequently

The makers have also produced a solid applicator in which the dressing may be soaked in a cream or liniment and wound on while wet. This can then be covered by another layer of dry Tubegauz. The cream is thus kept constantly in place, and not disturbed by scratching or rubbing. The use of linen or rag strips is probably simpler for individual cases, but the applicator may be of value in hospital practice.

BATHS

The following baths are sometimes used in dermatological treatment

1 Tar baths for psoriasis.
2. Potassium permanganate baths for infective conditions, pemphigus, etc.
3 Bran or oatmeal baths for chronic eczema, senile eczema, etc.
4. Sulphur baths for acne (obsolete)
5 Emulsified baths with or without foam, in some cases of infantile eczema.
6. Sodium bicarbonate baths.

An adult s bath contains	30 – 40 gallons
A child's bath contains	15 – 20 gallons
An infant s bath contains	5 – 10 gallons

Temperature

Hot	98 – 104 F
Warm	92 – 96 F
Tepid	75 – 92 F

The warm or tepid bath is most useful in dermatology The bathroom should be warmed to not less than 65° F

Tar Baths

The patient soaks in this for a quarter of an hour using a soft scrubbing brush to remove the scales from the lesions, and after drying himself either proceeds to ultra violet light or to the application of ointment. Liquor picis carb. 2–4 oz. is added to each bath. (This would be rather strong for the intertriginous or seborrhoeic type of psoriasis.)

Potassium Permanganate Baths

These are useful when a mild antiseptic action is required. About four teaspoonfuls of potassium permanganate crystals are mixed in a bowl of water and, when dissolved, poured into the bath. The crystals should not be put directly into the bath or a stain will occur where they dissolve. The solution is only valuable as an antiseptic while still pink, and its power is lost when it becomes brown. Permanganate leaves a stain on the bath, particularly if used on more than one occasion. The colour of the final solution should be rose-pink.

Removal of permanganate stains Spirits of salts, sulphurous acid or oxalic acid may be used, but with care, as they are corrosive and poisonous.

Bran and Oatmeal Baths

These are occasionally ordered for elderly patients whose skins are irritated by soap and water Even with this alternative, the heat of the bath itself the change of temperature involved in getting in and out of the bath and the friction of drying are themselves provocative in any cases of inflammation of the skin. About a pound of bran or oatmeal is tied in a muslin bag and soaked in boiling water or under the hot tap as it runs. A very thin starch emulsion results. The bag may then be used for dabbing the skin instead of soap or a sponge.

THE STARCH MULL

A variation used as a soothing colloidal wet dressing for larger areas and for any acute irritable or eczematous condition.

Use 1 tablespoonful of starch to 1 pint of boiling water (no boric acid). Boil the mixture for five minutes and dip layers of gauze or rag in the emulsion. Allow to cool. Lay over part. Change every few hours (wash out and boil dressing before using in starch again).

NOTE As it is easily contaminated, it should be handled with clean hands or rubber gloves.

Mild astringents, as for wet dressings, may be added to the water (e.g. 2 tablespoonfuls of Burow's solution a few crystals of potassium permanganate).

Sulphur Baths

This remedy is still advocated in some text books for the treatment of acne but is seldom used nowadays. A knob or rock of sulphur (potassium sulphurata B.P) is dissolved in the bath. It has a most disagreeable odour and the added disadvantage of staining metallic ware black by the deposition of sulphides. If used at all, no metal fittings should be present and the window opened. The bath can be cleaned with dilute sulphuric acid.

Emulsifying Baths for Infants

Although most infants with atopic eczema do not seem to be much harmed by baths, the extensive use of soap is usually avoided. Either of the following substitutes may be found useful.

To each bath of about 10 gallons, a tablespoonful of the following mixture may be added

(1) Emulsifying ointment B.P alone or
(2) (If an added foam is required)
Lanette wax S.X., 5 oz.
Sodium lauryl sulphate, 3 oz.

Mix together with about 16 oz water and allow to set. Use a tablespoonful for a child's bath.

This is whisked under the tap as the water is running. The wax can be used in combination with potassium permanganate or tar if desired

Sodium Bicarbonate Baths

These are comforting for pruritic conditions. For a full-sized bath $\frac{1}{2}$–1$\frac{1}{2}$lb. of bicarbonate is needed. As this is an alkali, its value is questionable when a reduced alkali-neutralizing power of the skin exists. It should not be used in patients with extensive eczema. Some authorities recommend buffering the alkalinity by preparing a colloid (oatmeal) bath after the addition of the bicarbonate.

Foot Baths and Sitz Baths

Partial bathing of this nature is of great value and comfort to patients with irritable infective or eczematous lesions of the hands, feet, the peri-anal area or groins. They are an extension of the wet dressing technique (*q v*) but should not be indulged in for too long at a time. Patients with cheiropompholyx find that hot hand baths of potassium permanganate relieve itching and help the blisters to break.

CHAPTER 42

Special Dressings

LEG BANDAGING

There are four ways of providing adequate support for the legs of patients with gravitational ulcers. It is taken for granted that a full and accurate diagnosis has been made and that causes of leg ulcer other than gravitational, have been excluded. But the methods described are applicable whenever there is oedema present, either in the foot or in the ulcer edges to this extent other types of ulcer and other gravitational syndromes will benefit.

The reasons for pressure bandaging have been given in an earlier chapter For the first few days after application all types of pressure support tend to be painful, especially when the ulcer is of the hypertensive or arteriosclerotic type the patient may need analgesics until this pain has worn off.

The following types of bandaging are in use

- Firm elastic webbing bandages, with or without a pad over the ulcerated site.
- Occlusive paste bandages.
- Adhesive plaster bandages of various types.
- Tubegauz bandaging.

Elastic Webbing Bandaging (Plates XXII and XXIII)

This is commonly used as a first measure and forms the basis of the Bisgaard treatment. The bandage consists of 3½ yards of 3-inch wide strong webbing of a type known as blue-line or red-line bandage. The red line has nylon incorporated in it and is more expensive But it is more durable, lighter and is more comfortable to wear In the majority of cases the blue-line type of bandage is adequate. There are a number of variations in the method of application which depend on experience and other circumstances. But, broadly the procedure is as follows

1 A simple dressing is applied to the ulcer itself—perhaps lotio rubra, gentian violet or tulle gras.

2. A piece of linen may then be applied to cover the surrounding skin.

3 A felt pad is cut out to fit round the edges of the ulcer if this is large, or is applied straight over the ulcer if it is small. The edges of the patch should be rounded. The thickness of the felt used varies but should be at least half an inch. If there is any surrounding eczema, non-adhesive felt is used, otherwise adhesive felt may be applied. Sorbo and Latex Foam can also be used. A double thickness of felt may be obtained by sticking two pieces of adhesive felt back to-back. If there is any difficulty in cutting the felt to the required shape, the edges of the ulcer may be painted with 1% gentian violet lotion and the felt pad quickly applied. An impression will be made over which the scissors can be guided It is important that the pad is pressed on, or slightly within, the oedematous edges of the ulcer

4 This pad is kept firmly in position by a length of tubular gauze.

5 The elastic webbing bandage is then applied carefully and with constant slight tension, first over the dorsum of the foot, then horizontally round the heel, and then with S-shaped turns to include all the skin of the heel and ankle. It is very important that these initial turns should be applied correctly and that an adequate firm support be given around the lower part of the leg and ankle. Felt pads are sometimes inserted behind the malleoli, the shape of the leg being converted as far as possible to that of a cylinder to enable constant pressure to be exerted all round it. In this way the bandage is brought up over the ulcer and pad to just below the knee, where it is secured.

6. The patient may remove the bandage at night but must be taught how to apply it correctly every morning.

7 As the ulcer decreases in size, smaller pads are cut. If the ulcer is of regular shape the initial pad may be cut through in one place and can be made progressively smaller by removing redundant felt on each side of the cut and pulling the edges together to make the central hole smaller

Occlusive Paste Bandages

These are applied in the usual manner directly onto the skin, with or without a pad over the ulcer itself Added pressure may be given by cutting this bandage up the back of the leg, applying tubular gauze with applicator pressure and then a webbing bandage. Only the latter is removed at night. The insertion of a strip of 01 Tube gauz (unopened) under the occlusive bandage enable this to be cut

rapidly by running one blade of the plaster scissors down the tube. (Plate XXI (*a*), (*b*), (*c*) and (*d*.) Such bandages are usually changed every week or ten days.

Adhesive Plaster Bandages

These are successful in some hands but not in others. Sensitivity reactions to all types of plaster bandage do occur but are much less common with the new perforated or strip type of bandage (such as *Lestroflex* which is more porous. If there is any particular need to fear sensitivity reaction the following devices may reduce this risk

1 Paint the limb with 1% gentian violet in spirit and allow it to dry before applying the bandage.
2. Apply a layer of Tubegauz first.
3 Apply the bandage inverted, i.e. with the sticky side out, and cover with ordinary bandage or tubular bandage. The last expedient is more useful in preventing the pain of removal from hairy skin than it is in preventing sensitivity reactions.

It is a common practice to put a strip of bandage down the sides of the leg from knee to heel and back, before applying the bandage itself

There are several types of bandage in common use each one has its own advocates. Success comes less with the choice of the bandage than with the skill and experience of the nurse who applies it. Some time should be spent in making sure that these bandages fit well round the ankle.

The application of these methods of support is only one part of the treatment of gravitational syndromes—though probably the most important. A separate dressing clinic for these patients, with an enthusiastic Sister in charge, is far the most satisfactory way of arranging for adequate time for the bandaging to be carried out properly

Tubegauz Bandaging

The bandage is applied with the applicator exerting pressure from the foot upwards. This is sometimes used over an occlusive paste bandage split at the back or it is applied daily to patients in hospital. But it is not practical for home use.

INTENSIVE USE OF DITHRANOL IN PSORIASIS

Contra-indications

This should not be used for patients known to be sensitive to dithranol, or to have had a previous exfoliative dermatitis from

dithranol, acute psoriasis or exfoliative psoriasis patients with active tuberculosis, diabetes or any serious medical condition.

Management of the Average Case

The course of treatment lasts from two to three weeks. The undivided attention of a nurse for at least half an hour each day is needed.

1 The patient takes a bath to which has been added 2 oz. liquor picis carb., soaking well and scrubbing away all the scales, crusts and the previous day's paste These may first be softened with emulsifying ointment or oil.
2. The patient is then exposed to ultra-violet light, preferably from a carbon-arc source. The time of the exposure is increased gradually to sustain a mild erythema.
3. The patient returns to the dressing-room, where Lassar s paste with ½% dithranol N.F is smeared carefully and thickly on to all the lesions with a wooden spatula. It should entirely obscure the psoriatic lesion and not be rubbed in. The surrounding skin is protected with a covering of yellow soft paraffin or zinc paste. This is particularly important in those with fair and tender skins.
4 The patient is then dressed in a tubular gauze undersuit or other suitable form of dressing which will keep the paste in place. (Plate XXV) Torn pieces of grease proof or toilet paper or of Scotch tape are extremely useful when the lesions are limited in number (Plate XXVIII.)

This treatment is repeated for five days a week, until all the psoriatic lesions are clear and a de pigmented refractory area appears at the sites of the old lesions. The rest of the skin will be more or less discoloured by the dithranol and ultra-violet light. (Plate XXIX.)

Treatment is discontinued if

(a) there is a widely spreading area of erythema or eczematous reaction over the whole body
(b) there are irritable spreading areas of erythema round the treated parts, or
(c) there are any signs of general constitutional upset.

Modifications

1 In a fair-skinned patient the treatment should be started with half-strength paste (i.e ¼% dithranol) which can be increased later

P

2. In a person with a pigmenting skin, having a few large, thick patches, double-strength paste (i.e. 1% dithranol) is used from the start.

3 *Guttate psoriasis* In most cases the attack in its extensive form is self-resolving, but when obstinate, the half-strength paste may be smeared over larger areas of the limbs and trunk, with or without ultra violet light, or residual areas only treated.

4 *Psoriasis of the scalp.* The dithranol technique can be used here, though with caution. The hair should be cut short and the scales and crusts of psoriasis removed first by treatment with salicylic acid ointment and shampooing. Half-strength dithranol is applied, the forehead, neck and ears being protected by Siccolam or zinc oxide paste.

NOTE Dithranol should only be used on the face with great caution. The patient should wash his hands after using the paste.

The urine should be tested once a week in all cases and any albuminuria reported to the medical officer in charge.

The degree of success obtained by this method of treatment depends upon the enthusiasm and skill of the nursing staff upon the reputation of the centre where the treatment is carried out, and upon the thoroughness with which it is given. It must not be left to the patient.

It also depends upon a sufficient thickness of paste being applied and left in position for twenty-four hours. The details of application must be followed scrupulously

CONSERVATIVE METHOD OF TREATING MULTIPLE VERRUCAE ('MOSAIC WARTS')

Mosaic warts consist of a large massed group of small warts occurring on one area of the foot. The method is also used for *multiple scattered verrucae, and occasionally for warts elsewhere.*

1 The warts are pared down as far as possible without causing bleeding.
2. The patient applies a salicylic acid plaster 40%, cut out in shape to fit the affected area. He leaves this on for five to seven days, covering it, if necessary with ordinary Elastoplast.
3 At the end of this time he takes off the plaster removing with it any dead skin which has been macerated by the effect of the salicylic acid Further dead skin and, later parts of the warts themselves may be pulled or scraped away by the patient.

4 He soaks the affected area in a saucer or egg-cup containing a 3% solution of formalin for ten minutes twice a day during the next five days.

5 *He repeats the cycle, applying the salicylic acid plaster as in* (1).

If carried out properly this treatment usually brings about cure of the warts in a period ranging from six weeks to three months. Though tedious, it does not involve a stay in hospital, a painful operation or the amount of scarring that would be left by any heroic methods of treatment for so large an affected area.

CHAPTER 43

Some 'Office' Procedures

PREPARATION AND USE OF CARBON DIOXIDE SNOW

Carbon dioxide snow is of great value in dermatology Its effect is due to local freezing of the tissues, a process that results in oedema, vascular dilatation and, ultimately in the formation of a blister It is perfectly safe and seldom leads to any visible scarring unless the raised area becomes infected.

Indications

1 Warts.

2. Other superficial lesions of the skin, such as seborrhoeic warts, solar and senile keratoses, telangiectases.

3 Areas of acne, especially scarred and cystic acne. Repeated applications of carbon dioxide slush to produce a marked erythema are given weekly to the whole affected area, or the solid stick is used on individual lesions.

4 *In a more specialized sphere it is helpful in the treatment of* certain degenerative dermal conditions, such as granuloma annulare and lupus erythematosus.

5 It may be used with success to eradicate some varieties of naevoid conditions (small haemangiomata and freckles).

Preparation

The snow can be produced in two ways

(*a*) A leather bag is fitted tightly over the nozzle of a cylinder of carbon dioxide gas. This collects the solid snow that forms by expansion of the gas. The block that is formed may be kept for some hours between layers of cotton wool and used when needed.

(*b*) A smaller quantity obtained by the same principle from a Sparklet machine. This apparatus is neat, portable and efficient, but see that the fine jet does not become blocked by dirt. (Plate XXX.)

SPECIAL MODIFICATIONS

1 Ten per cent sulphur is sometimes added to the carbon dioxide slush in the treatment of acne. The sulphur forms a powder which may be left on the skin but does not appear to the author to have any particular value.

NOTE If it is being used, the patient s and operator s clothes should be well covered with towels since the mixture splutters erratically

2 Carbon dioxide has been used mixed with acetone in test tubes which can be applied to irregular lesions on sites that are otherwise difficult to approach.

Method of Use

Carbon dioxide snow is used either as a solid block or painted on as a slush. The block (or pencil") is formed in a cylindrical wood or vulcanite tube, the snow being rammed down to form a solid column. These wooden applicators are in use at most hospitals. With the Sparklet cylinders an applicator is provided as part of the apparatus. The tip of the column may be pared down by a knife or pointed by rolling at an angle. The snow is held firmly and evenly exactly over the lesion, with the degree of pressure required In cases where a blister is to form, the snow should be kept in place until a spreading ring of white refrigerated skin appears round the edge of the column. It is slightly painful in application the pain shortly gives way to numbness. A child or young adult may be given two tab. codeine co B.P C. to take half an hour before the application. After treatment, the process of thawing out—which lasts for some seconds—is again temporarily painful. A blister forms which should be covered by a dry dressing for the next two or three days.

Pressure is usually needed for half to two minutes for the treat ment of warts, a quarter to one minute for leukoplakia of the buccal membrane, five to twenty seconds for haemangiomata, and five to thirty seconds for the treatment of lupus erythematosus. Both pressure and length of time needed vary with the depth and consistency of the lesion, the skill of the operator and the type of skin of the patient.

Slush

A small quantity of snow is ground up to a fine powder in a gallipot. A few drops of acetone are added to produce an opaque slush This is painted exactly on to the area with a small camel-hair brush or if the area is large (such as in acne of the face), with a swab. For

small lesions, e.g. in plane warts, painting should be continued until the area is frozen solid and for some seconds after this. In the case of acne, where a general erythema is needed, one should aim at an even application, sufficient to whiten the skin for a few seconds. In keloid or bad cystic acne a combination of the two methods may be needed.

VERRUCAE. STANDARD TREATMENT WITH CO_2 SNOW

For children above the age of five years

1 Give two tab codeine co B.P C. (Veganin) half an hour before treatment, and methylpentynol (Oblivon) ten minutes before if the child is apprehensive. Let him lie comfortably on a couch with the affected area on the foot easily visible. (Plate XXXII.)

2. Pare down the horny skin until all hyperkeratosis is removed, and mark the extent of the verruca accurately with a ball-point pen or indelible pencil.

3 Apply the CO_2 snow stick vertically onto the wart, covering it exactly The pressure must be even and constant and should vary with the suspected depth of the wart. The greater the pressure, the deeper the blister and the longer this will take to come to the surface. Continue for five minutes exactly

4 Some oozing and a certain amount of discomfort will take place during thawing. When this has ceased, a dry dressing should be applied A circular pad of adhesive backed felt with a hole in the centre is fitted to keep pressure off the wart.

5 The patient returns in a week. If the treatment has been carried out accurately a blister will have formed with the wart on top. This is cleaned with spirit and clipped away the wart with it.

6. The base is painted with 1% gentian violet in spirit, or some other suitable antiseptic lotion or astringent. A dry dressing is applied. The raw area will heal quickly and without pain.

NOTE (*a*) The amount of discomfort this treatment entails varies with the temperament of the child and the skill and personality of the operator Quiet surroundings and a confident and reassuring approach are essential. Half of pain is apprehension.

(*b*) It will sometimes be found that a blister is not fully formed on the surface (see 5) It is often possible, nevertheless, to nick the loose skin and to pull it away with the wart intact.

(*c*) This method is not applicable to multiple ('mosaic') verrucae (see next section). With modifications and with the use of CO_2 snow

for one or two minutes instead of five minutes, it comprises a standard treatment for warts elsewhere.

(*d*) *Modification to be used for very small verrucae* Freeze for a few seconds only and then scoop the verrucae out while the area is anaesthetized.

THE BIOPSY

Definition

The word biopsy should correctly be used for the examination of a piece of skin under the microscope. But it is commonly used to refer to the actual removal of skin for this purpose or for biochemical analysis. Excision of small lesions is carried out in the same way

Indications

A biopsy is indicated

- in skin conditions of doubtful diagnosis where histological examination may be expected to help
- to confirm the type or degree of malignancy e.g. in doubtful basal-cell carcinomata and intra-epidermal carcinomata. Treatment often depends upon the nature of changes found under the microscope
- as a therapeutic measure in the case of small solitary lesions, when a biopsy may be combined with the entire removal of the lesion ('excision biopsy')
- for an indication of the effect of treatment, e.g. during the healing of lupus vulgaris
- for the diagnosis of the nature of general diseases affecting the skin (e.g. sarcoidosis, leukaemia, reticulosis) These skin manifestations show a cellular infiltrate typical of the whole disease
- occasionally for biochemical investigation, or for searching for bacilli, foreign bodies, or fungal elements.

Technique

In skilled hands a biopsy may be performed within five minutes. Instruments required are

TROLLEY (Fig. 10)

1. Sterile towel, gauze, swabs and spirit or ether for cleaning the skin.
2. A steel cartridge syringe with xylocaine phials (2%) (without adrenaline). These give effective and painless anaesthesia. The syringe is duly assembled with dental needle and adaptor

3 A Baird-Parker scalpel handle with a No 15 Gillette blade (rounded edge).
4 Fine tooth-forceps (eye forceps are best).
5 *Two pairs of fine artery forceps ('mosquitoes')*
6. Needle-holder needle and stitch. Choice of material should be left to operator For the face, where a good cosmetic result is necessary Mersutures are ideal. For larger lesions, or

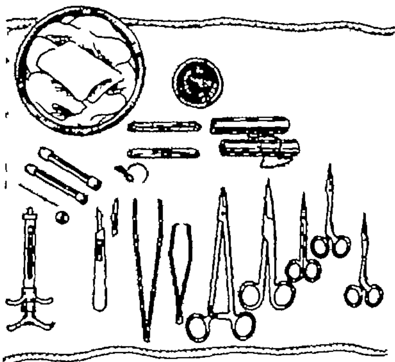


Fig. 10 Trolley lay-out for a biopsy

those on the legs, stronger material, such as nylon, is used. Tantalum or silver wire is very useful for stitches of leg biopsies where healing is usually slow and at sites where there is much tension or movement.
7 Pointed or small curved scissors, straight and curved stitch scissors.
8 *Histology bottle or specimen jar usually containing 10%* formol-saline. (Other fixatives may be appropriate depending upon subsequent staining technique.)

Observe the following:

1. Obtain written permission. A biopsy (especially if it leaves a visible scar) may be construed as a technical assault.
2. Make sure the patient is not sensitive to local anaesthetics or to any sterilizing solution or antiseptic used.

When the area is cleaned and infiltrated with the anaesthetic, a crescentric incision is made with a firm movement, first on one side of the lesion and then on the other meeting exactly at a point at each end. The incision must penetrate the full depth of the skin and

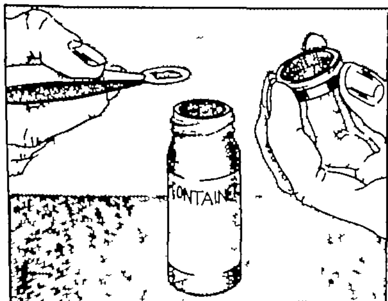


Fig. 11 The collection of a specimen for biopsy

be perpendicular. Holding the lesion with the forceps, this is now dissected out completely in its full depth, to the fatty layer. Venous bleeding is easily stopped. Occasionally arterial bleeding occurs but is easily sealed with artery forceps. The stitches are inserted with or without undercutting the skin. On the face sufficient stitches must be used to produce a thin, closely opposed scar. A dry sterile dressing, Whitehead's varnish, collodion, or Nobecutane are applied.

The portion removed should immediately be placed (skin surface up) on a small cut piece of blotting paper to keep it straight, and dropped gently in to the fixative (Fig. 11). It is otherwise likely to

be lost or trodden on. The jar is immediately labelled, giving the name, age of patient and date, and the site from which the biopsy was taken.

Remember Cut cleanly cut deeply and cut the right lesion. Always include some normal skin. For diagnostic purposes a skin biopsy need not be large—it always results in some cosmetic disability—but should not be fragmentary Half to three-quarters of an inch is usually adequate.

REMOVAL OF STITCHES

On the face five to seven days. On the legs eight to ten days. At sites of movement and tension eight to ten days. Other areas seven days.

NOTE Biopsies do not heal easily in (1) suppurative conditions (2) peripheral vascular disease (3) oedematous areas.

Avoid biopsies on the feet of elderly people with poor peripheral circulation. Biopsies should not be taken from an infected ulcer edge—*they neither heal well, nor are they informative*

Incisions should be made in the plane of the skin lines to avoid tension and for the best cosmetic effect. On the legs make longitudinal incisions when possible, insert firm mattress sutures, and apply anti-tension strapping and a crêpe or elastic bandage.

The report on a *biopsy will usually be available in eight days* more quickly on urgent request.

When a fat-stain has to be made, a note should be made on the accompanying form, as the section has to be fixed and treated differently When bacilli are to be sought, normal sterile saline should be used instead of formalin and the section wrapped carefully in sterile gauze damped with this. It should be despatched immediately

CURETTAGE

Curettage is the removal of excess or diseased tissue by the use of a spoon-shaped instrument known as a curette. (Plate XXXIII.)

Implements Used

Curettes are adapted to different types of use in different specialties. For skin work a single-ended or double-ended sharp curette shaped like a deep spoon is used for small lesions an ophthalmic curette is valuable

Trolley or Tray Setting

Fig. 12. Trolley lay-out for curettage.

1 Spirit, swabs, dressings. A bottle containing formol-saline to receive specimen, if any The use of Cetavlon as an antiseptic does not allow a firm grip to be made on the curette, but if spirit is used care must be taken that the skin is dry before the cautery is applied.
2. Cartridge syringe and xylocaine phials 2%.
3 Two or three curettes of varying sizes.
4 A pair of straight and a pair of small curved scissors.
5 A pair of toothed forceps.
6. The cautery if needed afterwards.

Example of Curettage

Taking a wart as example, the area is first infiltrated with the local anaesthetic. If there is a great deal of excess horn this is

clipped or cut away Holding the curette firmly and with a single firm, downward, twisting movement, the wart is removed from its bed. The base and the sides of the area are thoroughly scraped with the curette. The surface skin at the edges should then be clipped with the scissors and sterilized with the cautery This also seals bleeding-points, which may be troublesome especially in verrucae of the feet. If a dry dressing is applied the patient should leave it untouched for two or three days If tulle gras, it may be changed daily A ring of adhesive felt applied over the verrucae will enable the patient to walk in comfort. He is instructed to keep the area dry and should refrain from walking in bare feet and shoes without socks or stockings.

NOTE Curettage alone scars little, if at all. Cauterization (*q v*) usually leads to some scar formation. For benign lesions, therefore, this should be performed lightly by merely gently running over the surface of the curetted area.

THE ELECTRIC CAUTERY

An instrument producing destruction of the tissue by means of a red-hot platinum-tipped applicator The mains current is passed through a rheostat, which controls its power Applicators are of various shapes.

The apparatus should be connected and tested by the nurse before use. For most purposes a dull red heat is sufficient.

Uses

- Cauterization of tissue, alone and after curettage, e.g. warts, basal-cell carcinomata, lupus nodules.
- Treatment with point applicator for destruction of stellate angiomata or skin tags.
- Destruction of areas of hypertrophic naevoid tissue (under general or local anaesthesia).
- Treatment with cutting applicator for removal of pedunculated moles.

NOTE (1) Keloid formation is a risk attending the use of the cautery on larger lesions, especially in susceptible subjects, and on the upper part of the body

(2) The electric cautery should not be used with explosive anaesthetics such as ether nor with inflammable skin preparations such as spirit.

ELECTRO-COAGULATION DIATHERMY

This is carried out either by a standard bipolar diathermy machine or by a specially designed monopolar machine. (Plate XXXI.) Local anaesthetic is seldom needed—at any rate for small lesions. The current is adjusted to the degree of coagulation required.

NOTE It is less painful for the patient if the needle is *not* moved in or out of the skin while the current is on.

Uses

Coagulation-diathermy is used in the following conditions

- Cellular (intradermal) naevi and hairy moles which are not pigmented.
- Warts.
- Skin tags of the neck or armpit.
- Superficial protuberant naevoid growths, such as linear warty naevi.
- Superficial telangiectases and stellate angiomata
- A wide variety of other superficial lesions, when simple destruction only is required.

A special technique has been evolved to deal with wens and sebaceous cysts. The needle is inserted a few millimetres into the cyst, and the contents are coagulated until the fingers which steady the cyst on the outside feel hot, when the needle is withdrawn. An area of local coagulation round the entry point of the needle enables the coagulated contents, together with the cyst wall, to become expressed naturally through this opening in the course of three or four weeks. A depressed scar will result.

Diathermy-coagulation should not be used on dark, pigmented moles unless (under local anaesthesia) the whole area is completely and widely destroyed, irrespective of cosmetic result. Excision is usually preferable and enables the histology to be studied. As a general maxim it is wise never to destroy a skin lesion the nature of which is in doubt.

In recognized cancerous conditions of the skin, unless the histology is known, the area must be completely destroyed and the patient seen at regular intervals in the future.

Example of Use

A patient with multiple cellular naevi is placed in a good light. No anaesthetic is needed. The needle is inserted into the mole and

glass bottle as it quickly takes up water from the atmosphere and becomes weak. It is applied in the same way as phenol, i.e. on a wool-tipped orange-stick. The other end of the orange-stick may be dipped in 95% spirit, which stops the action of the caustic and is used to control its effect. In view of its action on unbroken skin, great care is needed in handling this caustic. It is particularly used for xanthelasmata of eyelids, senile and solar keratoses, and seborrhoeic warts, and it is sometimes used on plane warts.

Liquid Acid Nitrate of Mercury (*Use with care*)

A time-honoured caustic. Used on broken surfaces it has a more profound effect than the others and is haemostatic. It is thus useful for touching the base of curetted warts, and has a particular application of traditional use in the destruction of lupus nodules (either *alone on a pointed orange-stick or after they have been curetted).*

Other caustics are used according to local habit and tradition, e.g. fuming nitric acid, picric acid, glacial acetic acid, etc. A combination of a drop of phenol followed by a drop of fuming nitric acid is said to explode with a small report and a puff of smoke. Though this has been advocated for the destruction of warts, its use must surely be confined to the courageous.

Note All caustics must be handled with care and used with discretion. The opened containers should not be placed near patients, and the contents should always be checked before use. Trichloracetic acid is easy to confuse with acetic acid—but far more dangerous to use.

APPLICATION OF THORIUM X

Thorium X is a radioactive substance having a very low penetrating power and a short half life. Its effect is virtually expended in the upper layers of the skin within forty-eight hours after application.

It is sent by rail as and when required, from the makers, Derby Luminescents Ltd. Certain regulations applicable to the transit of radioactive substances must be followed.

It is convenient to arrange for several patients to have this substance applied at the same time, so that one consignment is sufficient.

Form, Strength and Application

Thorium X is supplied in spirit, varnish or collodion. The strength varies from 500 to 4000 electrostatic units per millilitre.

The area to be painted is first cleaned and the substance then applied evenly with a camel-hair brush. Be careful not to let it run down the face or into the eyes. If the spirit preparation is used, the area treated should be then painted with collodion or sprayed with Nobecutane. In any case it should not be washed for forty-eight hours.

Paintings are repeated every two to four weeks. A variable erythema occurs for a few days after application and this may leave a pigmented, stained area for several weeks. Late atrophy of the skin has not been reported from the use of thorium X, and though its action is limited, it is a safe form of radioactivity

Uses

1 Port wine naevi, especially when faint, pink, limited in extent and on the face. Treatment extends over twelve to eighteen months. These stains pale to a variable extent but are never eradicated.

2. Patches of parapsoriasis en plaques, and other fixed, superficial erythematous lesions.

3 Localized patches of neurodermatitis

4 Localized patches of psoriasis.

FLUORESCENCE. USE OF WOOD'S LIGHT

An ultra violet lamp fitted with a special (Wood's) glass to cut out all visible rays is used in dermatology for several purposes. The lamp may be obtained in the form of a bulb with a dark purple glass which is fitted, via a transformer to the mains. These bulbs are delicate and should be handled with care. Once they are heated up in use and then turned off they must be allowed to cool down before being used again. All visible light must be excluded from the examination room and the operator should allow his eyes time to become accustomed to the darkness.

Uses

1 In detecting hairs affected by microsporon (ringworm) infection in the scalp. This is the most important use (Chapter 21). The hairs show up with a greenish fluorescence (the colour of the luminous dials of wrist-watches) Normally there is no fluorescence, but a light bluish colour caused by some ointments is often seen.

2. In the manual epilation of hairs affected by ringworm, especially in *M felineum* infection. The scalp should be systematically and carefully examined and all affected or doubtful hairs removed

with special flat-bladed epilating forceps (Fig. 13) Fluorescent hairs can be secured onto paper or a glass slide for culture, or destroyed. Needless to say the forceps must be sterilized after each patient, and affected areas should be examined last to avoid infecting healthy ones.

3 In detecting fluorescence of tongue, nails or skin in certain conditions.

4 For experimental purposes, such as the use of fluorescein in estimating the circulation time.



Fig. 13 Epilating forceps.

THE PATCH-TEST

For the theory of this method of investigation and its indications, see Chapter 3 A list of the strength of some common agents used in patch-testing is given on page 244

The Patch-test Square

A standard square should always be used in testing and should incorporate the following

(i) an outer square of firm adhesive about 2 inches square
(ii) a smaller square of polythene, washed X-ray film or jaconet
(iii) an inner piece of gauze (optional) which may be soaked or smeared with the substance to be tested. (Plate XXXIV)

Elastoplast, Poroplast or Scotch tape may be used for (i). The recently introduced Airstrip is excellent. Dalmas prepared patch-test squares are also useful.

TESTING

It is usual to test one or two suspected agents at a time, but occasionally battery tests of a number of substances are used together *A control square must always be used at the same time*

SITE

The skin should be gently cleaned first with ether Either the area of the shoulder blades or the inner aspect of the arm is chosen for testing. Clear areas of skin near the site affected should not be used.

READING

The patient is instructed to remove the squares only if marked itching takes place within the next two days. He reports back in forty-eight hours and the squares are removed. A positive reaction is usually evident, but occasional delayed reactions occur after seventy two hours and the site should be inspected again then. With clothing material the test may have to be read again in a week to detect delayed reactions. Calamine lotion, zinc cream or hydrocortisone ointment are applied to irritable areas resulting from positive reactions.

FALSE REACTIONS

1 An irritant reaction to adhesive plaster occurs, showing as erythema with papules due to infection and sweat retention.

2 A temporary reaction of removal —an erythematous flare.

3 True sensitivity to the adhesive itself—an eczematous reaction separated from the tested agent by the intervening layer of jaconet or polythene.

NOTE (1) Do not patch-test in acute stages of contact dermatitis.

(2) A flare-up of the original sites affected often occurs with a highly positive patch-test.

(3) It is possible, by patch-testing, actually to sensitize a patient, and this test should not be carried out with known sensitizers without adequate reason.

LIST OF AGENTS COMMONLY USED IN PATCH-TESTING

A large collection of agents for patch-testing will be built up at any dermatological centre, particularly those in industrial areas. Comprehensive lists of sensitizers and irritants may be found in standard text-books and will not be referred to here. They depend in any case upon the locality of the skin clinic and the prevalent industries of the area. The common causes of sensitivity reactions are glues, resins, wood-dusts, polishes, plastics, rubber adhesive materials, paints and solvents.

Irrespective of such special industrial risks, there are a number of agents which are fairly common offenders in producing sensitization reactions or which may be used in patch-testing patients in the investigation of an obscure dermatitis. Some of these are given on page 244, together with suggested strength of application.

Agent	*Suggested Strength*	*Reaction*
Nickel chloride	0 5 or 1%	Nickel sensitivity
Potassium dichromate	0 1%	Cement dermatitis and chrome sensitivity
Eosin (in spirit or yellow soft paraffin)	5–50%	Lipstick sensitivity
Lanolin	(as it is)	Occasional sensitivity to lanolin bases in ointments and cosmetics.
Paraphenylene diamine	1%	Hair-dye sensitivity
Potassium iodide	2–5%	Iodine sensitivity
Oil of Bergamot	2–5%	Sensitivity to eau-de-Cologne.
Benzocaine (in yellow soft paraffin)	2–5%	
Chrysarobin (in yellow soft paraffin)	0 2–0 5%	Do not confuse normal irritant reaction.
Formaldehyde	0 2–1%	
Mercury (ammoniated or yellow oxide)	2–5%	
Resorcin	1–3%	

Some of these produce irritant reactions in stronger concentrations, particularly formalin and dichromate.

COLLECTIONS OF FUNGUS SPECIMENS

Samples of skin, hair or nails are frequently taken in order to (1) seek microscopical evidence of the presence of fungus infection (2) culture the material and identify the type of fungus.

Collection

Skin scales

Tops of vesicles newly affected red, scaly lesions the edge of an affected area and normal skin just beyond it. NOT thickened, macerated skin, pustules or secondarily infected areas.

The scales are gently detached or scraped from the skin with a rather blunt scalpel (a single piece steel scalpel is best) and forceps. They may be collected on a slide or a small piece of black X ray paper

Hairs

In a microsporon infection, take hairs that fluoresce. In cattle ringworm and other non-fluorescing forms, take hairs at the edge of early lesion. *Pustular lesions are unlikely to show fungus. Whitfield's* forceps should be used.

Nails

A sharper scalpel will be needed. Hold the finger firmly and cut towards the free end. Slivers of nail will come off quite easily Much practice is needed to make sure that the pieces fall onto the paper

held underneath. Otherwise they must be picked off clothing and furniture. The dark discoloured area should be chosen and the top few slices discarded.

Preparation

For immediate examination (usually a small part of the sample)

(*a*) Place on slide. Apply 5–10% potassium hydroxide—two or three drops from a pipette. Cover with a watch-glass. Add more potash if required.

(*b*) Leave in a warm place for ten minutes. (Fifteen to thirty minutes in the case of thicker nail clippings.)

(*c*) Examine under microscope. The fungal mycelia and spores stand out clearly in low and high power if the light is cut down a little.

For culture

(*a*) Place the scrapings in a watch-glass cover with 95% alcohol for a minute. Drain.

(*b*) Transfer to an appropriate culture tube or bottle with a sterile wire loop or needle.

(*c*) Label, and leave at room temperature.

ISOLATION OF THE ACARUS IN PATIENTS WITH SCABIES

In the rare crusted scabies, affected areas of skin are heavily infested with mites and eggs, which can be found with the greatest ease. But only a very few mites are present in most cases of scabies and they are often very difficult to find. Since the isolation of the acarus confirms the diagnosis indisputedly it should always be sought in doubtful cases.

Most of the acari are present on the hands and wrists. The female lies in the burrow where she lays her eggs.

Method

1 (*a*) A close examination of the finger-clefts, wrists, palms and soles may show any obvious burrow as a very thin straight mark a few millimetres long. There is often a papule near one end. Some time may have to be spent in searching, with the aid of a lens, as the burrow may be far from obvious.

(*b*) The burrow is then opened-up with the point of a needle, using firm pressure, but not sharply enough to draw blood. The acarus adheres to the end of the needle, where it is just visible.

(c) It is transferred to a slide and examined under the low-power lens of the microscope. (See Plate XIX.)

2. (a) If no burrow can be found, a drop of 10% liquor potassae is dropped onto any likely area—the finger-clefts, the fold of the wrist, a group of papules on the thumb

(b) After five minutes, the macerated skin in the treated areas is scraped off gently with a scalpel and transferred to a slide.

(c) A few more drops of liquor potassae are added and a cover slip applied. The preparation is examined systematically under the low-power lens. An acarus, or the characteristic oval eggs, may then be seen among the scales.

CYTODIAGNOSIS

The Examination of Scrapings from Blisters and Tumours

The change that takes place in epidermal cells in certain bullous skin diseases is diagnostic. Such cells can be examined by taking scrapings from the base of blisters

TECHNIQUE

1 Clean the skin gently over a typical blister
2. Clip away the roof and gently dab to remove the blister fluid.
3 With a small scalpel or tenotome, scrape the base and edges of the blister
4 Smear the material on a slide, spreading it evenly as for a blood-film.
5 Allow to dry Stain with haematoxylin and eosin.
6. Examine under $\frac{1}{6}$ and $\frac{1}{12}$ lens.

The diagnosis of pemphigus is confirmed by the finding of rounded acantholytic cells. These are not seen in dermatitis herpetiformis. Some virus diseases show balloon cells.

The same method is used for the diagnosis of certain malignant tumours of the skin. Scrapings, curettings, or the edge of a biopsy specimen are pressed onto a slide and the cells that adhere are stained and examined. *The method is reliable in experienced hands.*

PROVOCATIVE DRUG TESTS

When a drug eruption is suspected, a provocative test may be ordered by the doctor in order to confirm the diagnosis. Though carried out under medical supervision, it will fall to the nurse to watch carefully for any reactions on the patient and to report them accurately The following points must be satisfied

1 The provocative dose must not be large enough to endanger life or to cause any serious reactions.
2. It must not be given in the acute phase of an eruption.
3 No other drugs should be given at the same time.

In practice it is most used in suspected cases of idiosyncrasy to phenolphthalein (from laxatives) acetylsalicylic acid, antipyrin, iodides and barbiturates. Provocative doses are weaker than those normally given, but may have to be increased progressively if no reaction occurs.

Example	Phenolphthalein	$\frac{1}{8}$ – $\frac{1}{2}$ – 1 grain
	Aspirin	2 – 20 grains
	Iodides	$\frac{1}{2}$ – 2 – 5 grains
	Penicillin	100 – 1,000 – 10 000 units
	Streptomycin	0 05 – 0 2 – 0 5 G

Tests should be made at intervals of forty-eight to seventy-two hours and the skin carefully examined for any sign of eruption or exacerbation of a previous lesion. The patient may complain of itching an hour or two after the test dose is given, or show a rise in temperature

In the case of Sedormid (a carbromyl-urea drug) a patch-test may reproduce the purpuric sensitivity lesions in the area tested (presumably by absorption). Sometimes sensitivity to a drug taken internally involves epidermal sensitization and can then be detected by a patch-test—a safer method than the provocative drug test.

Appendices

APPENDIX I

A FORMULARY FOR DERMATOLOGICAL USE

HOW TO USE THE FORMULARY

Use the formulary for looking up an actual prescription and finding out something about it.

If you have a particular condition to treat, turn to page 264 to find a list of suitable prescriptions.

To learn the principles of compounding skin preparations, read pages 253–4

If you wish to know the action of a particular ingredient, turn to pages 254–7

This list of applications is short and cannot be comprehensive. If the formulae in use in your hospital are different, try to estimate first whether these are creams, liquids, pastes, ointments, etc., and then turn to the appropriate section and compare the formulae remember that the base is a guide to the action required—cooling, soothing or protective—and that the ingredients may be of secondary importance.

Nurses engaged chiefly in dermatological work should refer to the *St John's Hospital Pharmacopoeia*, a comprehensive guide to standard dermatological prescribing in England.

CONTENTS OF FORMULARY

6. On stock preparations and on mixing
7. Standard prescriptions for common conditions
8. Shampoos and hand creams
9. Hydrocortisone
10. Antibiotics
11. Antihistamines
12. Table of hypnotics

1 INTRODUCTION

1 This formulary makes no pretension of being complete. It contains a number of simple prescriptions which can safely be used in the treatment of all the common forms of skin disease.

2 Each hospital and nursing school has its own tradition of therapy and its own pharmacopoeia.

3 The scope of the formulary can be widened by mixing individual prescriptions.

As there is often little understanding of the action of ingredients used in dermatological preparations and of the bases in which these are presented, an introductory section deals with this. At the end of the formulary there are sections dealing with certain groups of substances in more detail.

The relatively small number of prescriptions given are intended as examples of typical, standard preparations in each group, and, obviously do not include all variations likely to be employed by dermatologists. More information is given in the section on Pastes than appears in the usual standard works, since these are supplanting the paraffin-type ointment that still holds pride of place in the British formularies.

Where the prescription is taken from the B.P.C. or the British National Formulary (1957), only an indication of the main constituent or the chief use of the preparation is given.

An asterisk (*) is placed against those prescriptions which are most commonly used and which should form the stock of anyone dispensing their own skin remedies.

Abbreviations

B.P	*British Pharmacopoeia*, 1953
B.P.C.	*British Pharmacopoeia Codex* 1954 (or as quoted)
B.N.F	*British National Formulary* 1957
St. J	*St John's Hospital Pharmacopoeia*

St. T. H. *St Thomas's Hospital Pharmacopoeia*, 1957
Polano *Skin Therapeutics* M. K. Polano (Elsevier 1952)

The permission of the authorities concerned to include formulae from these sources is gratefully acknowledged.

2. COMMENTS ON DERMATOLOGICAL PREPARATIONS

Principles of Prescribing for the Skin

Each preparation should be

1. *Simply compounded.* Avoid unnecessary additions. Each agent added increases the risk of sensitization.
2. *Effective* The optimum strength of ingredients must vary with the state and stage of the disease, and with the type of skin of the patient.
3. *Harmless* Where two or more agents are equally effective, choose the one less likely to sensitize.
4. *Pleasant for the patient to use* This quality must not take precedence over the others advantages gained are likely to be offset by the greater risk of sensitivity to compound bases. Many of the new emulsifying bases, however offer great advantages without increased risks.
5. *Cheap* The final consideration demands some attention. Where two agents are equally effective, choose the cheaper Olive oil is still widely prescribed for cleansing the skin, but arachis oil is equally effective and half the price.

Practical points include: the care needed in the preparation of some emulsions the variations which exist in the melting-points of various paraffin bases, and in the consistency and effectiveness of coal tars. Identical preparations, made according to the same formula, may turn out to be different when made by two different pharmacists—a fact recognized by patients, who will often have faith in one and not in the other Zinc oxide powder that is not fine in consistency lumps in lotions the thickness of an emulsion is altered by using a heated mortar

The base of an ointment or cream may alone exert a beneficial effect (indeed, if chosen wisely it should do so). It is a mistake always to attribute this to the ingredients. The choice of a correct base is most important. When a patient says that he is sensitive to zinc it will nearly always be found that some sensitizing substance was added to a zinc cream or paste mixture, or that the

application itself was wrongly used for his particular complaint. Zinc paste—in itself harmless enough—would not be suitable for an acute exuding eczema. True sensitivity to zinc is extremely rare

> The choice of vehicle (base) should be based on a thorough knowledge of the existing probabilities and not be limited to petroleum (Vaseline petroleum jelly), white paste and wet dressings only. We have to consider in the first place the probable action of the vehicle on the patient's skin. Next to this we have to be guided in our choice by the principle that the patient should be hampered as little as possible in his professional activities by the treatment of his skin disease. Moreover his clothing should not be damaged more than is absolutely unavoidable. Finally there remains the factors of "feeling" in determining the choice. This feeling can only be acquired by long practice. —(POLANO, M. K., *Skin Therapeutics*, p. 5.)

The author owes a considerable debt to many pharmacists and pharmacopoeias in the preparation of this formulary. Permission to include some general material from *Skin Therapeutics* by M. K. Polano, 1952, is gratefully acknowledged.

3. COMPONENTS OF SKIN PREPARATIONS

The components of all skin preparations are

(1) Powders.
(2) Greases and oils.
(3) Liquids.

These form

(1) + (2)	greasy pastes and ointments.
(1) + (3)	lotions, drying pastes, varnishes.
(2) + (3)	emulsion bases.
(1) + (2) + (3)	cooling pastes and creams.

Creams may be emulsions of water-in-oil type (cold cream) or of oil-in-water type (vanishing cream).

(1) Powders

These are used as drying and absorbing agents.

Zinc oxide is a mild, soothing powder tolerated by all skins. It degenerates after lengthy exposure to the air. It must be finely sieved.

Calamine consists of natural zinc carbonate and ferric oxide (which colours it) Commonly used in lotions in this country

Talc (a silicate) varies in quality Venetian talc is best. Its use in surgery has been discontinued because of silica tissue reactions, but it is harmless on the skin.

Salicylic acid is a keratolytic and mild antiseptic.

Boric acid. Though useful as an antiseptic on adult skins, it should not be incorporated in any dusting powder for babies, nor should it be used alone on infants skins. Some cases of poisoning by absorption have occurred.

Medicinal dusting powder should not be scented, but may be coloured, if desired, by addition of ferric oxide or by the substitution of calamine.

(2) Greases and Oils

(*a*) True fats and natural oils.

(*b*) Mineral greases and oils.

(*a*) True fats and natural oils

FATS

Lard. Previously much used. Liable to variation and rancidity Occasionally used in scalp preparations.

Wool Fat (adeps lanae). Widely used. Emulsifies well as a water in-oil (W/O) preparation.

Lanoline Wool fat and water An extract of wool fat is used in ung. aquosum B.P (*q v*).

Cetyl Alcohol Obtained from whale fat. Emulsifies well in W/O form.

Lanette Wax. Used for preparing oil-in-water (O/W) emulsions. Contains cetyl alcohol and other fatty alcohols. Used in Emulsifying Wax, B.P (*q v*).

OILS

Olive Oil. Now often superseded by cheaper oils.

Arachis Oil ('nut oil Cotton-seed oil is also used.) Has all the qualities of olive oil at half the price. May be used alone as a cleansing agent or incorporated in creams, ointments and pastes.

Castor Oil. Used in hair lotions and brilliantines. It dissolves salicylic acid and is soluble in spirit.

(*b*) Mineral greases and oils

Liquid Paraffin. Sometimes used as a cleansing agent.

Yellow Soft Paraffin. A grease frequently used in ointments and pastes. It forms a greasy impervious layer on the skin, and is thus often mixed with emulsifying agents.

White (hard) *Paraffin.*

Polyethylene Glycols (Carbowax) Synthetic mixtures of different consistency Used in many proprietary preparations and some official ones. Advantages still to be assessed.

(3) Liquids

These are used as solvents and in emulsions, creams and pastes. They may be used alone in the form of lotions, with therapeutic agents dissolved in them.

Water

Lime Water A solution of 0 15% calcium hydroxide. A soothing solution widely used in liniments and cooling pastes.

Alcohol. Used denatured as industrial methylated spirit.

Ether An evaporating fluid (highly inflammable) used as a fat solvent.

Chloroform. Another evaporant, used as a solvent.

Acetone A solvent, particularly for tars.

Benzene A solvent.

4. ACTION OF COMMON SPECIFIC AGENTS

Salicylic Acid. Soluble in castor oil and alcohol—scarcely in water Softens and macerates the horny layer of the skin. Used in paints, pastes, ointments and as plasters. (25–45%)

Boric Acid. Used in wet dressings, lotions and powder Best avoided altogether in infants.

Undecylenic (undecenoic) and Propionic Acids. Used as free acids or zinc salts as fungicides.

Chrysarobin and the synthetic anthranols, Dithranol and Anthrarobin. Derived from a tropical tree. Used extensively in psoriasis and ringworm. Stain skin and linen, and cause conjunctivitis if rubbed in the eyes.

Aniline Dyes. Crystal ('gentian') violet, brilliant green magenta Widely used as antiseptics and fungicides in lotions, creams and pastes. A jelly is also marketed. Gentian violet is particularly useful in thrush infections.

Mercury As calomel in powders as perchloride in lotions—1/4000–1/5000 (1% is corrosive to the skin) as ammoniated mercury in ointments, 2–10% as yellow oxide in eye ointments.

Phenol. A caustic when pure. Used as an antiseptic and anti pruritic in 1–2% solution.

Resorcinol. Keratolytic and fungicidal. Darkens fair hair Used in acne, seborrhoeic conditions and fungus infections.

Tars. A great variety of tars exist

(*a*) *Bituminous Tars—Ichthyol* Originally obtained from fossil deposits (shale). Anti-inflammatory and soothing. *Ichthammol* is a synthetic preparation, the consistency of which is variable. Ichthammol may be painted on a boil and covered with wisps of cotton wool to form an adhesive covering. (Polano)

(*b*) *Wood Tars.* Beech, birch, pine, etc. Not much used. Juniper (cade) oil is still used in scalp preparations.

(*c*) *Coal Tars* A mixture of paraffin hydrocarbons. Stimulating and mildly antiseptic. Used in eczema and psoriasis in 2–10 / concentration. A purified solution in alcohol is also used (liq. picis carb.) but is less effective.

Sulphur A valued agent for use in acne and seborrhoeic conditions. Also a parasiticide, but its use in scabies has been superseded by benzyl benzoate. Use the precipitated form

Tannic Acid. Has some value as a protective in tinctures (as for bed-sores and herpes zoster). Also a protective against ultra violet light (5–10% in an O/W cream).

Benzyl Benzoate. A specific for mite infestation. Used in an emulsion.

Dicophane. The official name for D.D T Used in emulsions and dusting powder Resistance to D.D T is said to be developing. Not effective against the house fly

5. SHORT FORMULARY

(An asterisk ( ) indicates an essential prescription for nursing and use in general practice.)

I. Powders

(A) Standard Powders

*1 *Conspers. zinc. oxid., amyli et talc B.N.F*
One part each of zinc oxide and starch in two of talc.

2. *Conspers zinc. stear B.N.F*
Contains boric acid and zinc stearate, giving added slip

R

3 *Conspers zinc. oxid. et acid. salicyl. B.N.F*
Salicylic acid 5% in zinc oxide and starch.

(B) Specialised Powders

4 *Conspers hydrarg subchloridi co B.P C*
Calomel 5% and bismuth subgallate 25% in talc. A useful, mild antiseptic powder

*5. *Conspers dicophan. B.N.F*
D.D T dusting powder (10%). An insecticide.

*6. *Conspers zinc. undecen. B.N.F*
Contains undecenoic acid. A fungicide.

Antibiotics (1–2 5%) can be added to 1–3 tabulated above, or used in talc or zinc oxide alone, or in K285 starch (Boots).

II. Bases

(A) Standard Bases (other than simple greases and fats)

*7 *Ung alcoh. lan. B.P*
Wool alcohols and paraffins.

8. *Ung aquos B.P*
(W/O). Cold cream. Equal parts of No. 7 and water

*9 *Ung emulsif B.P*
(O/W). Vanishing-cream type. Lanette wax, liquid paraffin and water Can be used as a cleansing agent.

(B) Other Bases

10. *Lanette wax S X*
5–10% in water

11 *Propylene glycol.*
A solvent for antibiotics, etc. Sometimes sensitizes.

The more complex bases, incorporating several ingredients, will not be considered here. They have many advantages and are widely used in the cosmetic industry But their complexity—sometimes necessary for stability and emulsification—increases the risk of sensitivity reactions.

W/O and O/W emulsions

The difference between these emulsions is the difference between butter and cream. In W/O emulsion the water droplets are held in a fatty base (and may separate out as water does from butter) in O/W emulsion the creamy droplets are suspended in a watery base and may separate as fat. Milk itself is an unstable O/W emulsion, with the fat separating as cream on standing.

O/W bases are more commonly used in dermatological preparations. W/O bases are used as cold creams. They are cooling, but less penetrating.

III. Lotions, Tinctures, Varnishes

(A) Lotions

12. *Lot. evap B.N.F*
    A simple evaporating lotion of ammonium chloride in dilute spirit.

*13. *Lot. plumb evap B.N.F*
    Lead subacetate in dilute spirit. For bruises, irritating erythemas, drug rashes.

14. *Lot plumb et glycer B.P C.* (1949)
    Dilute with equal parts of water A cooling, antipruritic lotion.

*15. *Lot acid salicyl. et hydrarg perchlor B.P C* and *B.N.F*
    Mercuric chloride and salicylic acid in dilute spirit. For dandruff and other scalp affections.

*16. *Lot calamin. B.P*
    Too drying for exuding surfaces, but useful for erythemas, bites, urticaria. Contains nearly ½% phenol. Ideal formula not yet attained.
    (*a*) Argyrol ½%.
    (*b*) Ichthyol 2–5% and other agents may be added

*17 *Lot calamin. cum sulphur* 2%.
    For acne and rosacea.

18. *Lot cupr et zinc sulphat. B.N.F* (Dalibour water).
    Copper sulphate 6, zinc sulphate 20 parts in camphorated water

19 *Lot zinc sulph. B.P C* (Lot. rubra).

(B) Liquids and Paints

*20. *Liquor violae crystallinae (St J)*
    1% in water Brilliant green and other dyes can also be used. A very useful watery paint.

*21 *Pig tinctor aquos B.P C.*
    Brilliant green and crystal violet. 1½% each in 50% spirit. A very useful drying paint.

*22. *Pig magent B.P C.* and *B.N.F*
    Castellani's paint

23. *Pig podoph. (St J)*
    25% in spirit. For soft warts. Apply sparingly—very strong.

(C) 'Shake' Lotions (watery and oily)

Contain 30–40% powders in 60–70% liquid (Polano).

Based on	zinc oxide talc	equal parts to 30–40.
add	glycerine water	equal parts to 100.

Ideally these lotions should form a thin gel and be dispensed in wide necked bottles. They must be shaken before use.

24. *Lot. zinc. oxid. (Polano).*

Bentonite	4		
Zinc oxide			
Talc	aa	ad	30
Glycerine			
Water	aa	ad	100

Ten per cent arachis oil can displace 10% of water for an oily ('zinc-oil') lotion which does not dry so quickly. Other ingredients can be added by displacing an equivalent amount of powder or liquid.

IV Creams

Creams are smeared thickly on the skin. Dispense 4–8 oz.

(*a*) Standard

*25. *Crem. calamin. co. B.P.C.*
A relatively thin cream or oily lotion. Used widely for acute *inflammatory and eczematous states. Ichthyol 2% can be added.*

*26. *Crem. zinc. oxid. B.P.*
Standard zinc cream.
(*a*) Ichthyol 2%.
(*b*) *Crystal violet, 1% can be added.*

*27. *Crem. zinc. oxid. et ichthum. B.P.C.* and *B.N.F.*
5% ichthyol. In sub-acute eczemas. (The formula is somewhat different from that of zinc cream.)

28. *Crem. norm. B.N.F.*
A buffered cream with a pH of 5. Emulsifying ointment base.

*29. *Crem. zinc. et ol. ricin. B.P.*
Zinc and castor oil. Used for infants' rashes.

(*b*) Special

30. *Crem. acid. salicyl. co. penetrans (St. J.)*
A sulphur and salicylic cream that can be rubbed into the skin

in cases of acne, seborrhoeic dermatitis, etc. Resorcin may be added (2–5%).

*31. *Applicat benzyl. benz. B.P*
25% emulsion. For mites.

*32. *Applicat. dicophan. B.P C.* and *B.N.F*
2% emulsion of D.D T For lice and fleas.

V Ointments

The British formularies still contain a large number of ointments. Some of these, in emulsifying bases, are better classed as creams, others as greasy pastes (see below). Many are little used nowadays. The following are the most valuable.

*33. *Ung acid. benz co B.P C.* and *B.N.F*
Whitfield's ointment. For ringworm. Now in emulsifying ointment base—originally in coconut oil.

34. *Ung acid. boric. B.P*
1% in paraffin base.

*35. *Ung acid. salicyl B.P*
2% in ung. alcohol lanae.

*36. *Ung acid. salicyl. et sulphur B.P C.* and *B.N.F*
3% of each in ung. aquosum.

*37 *Ung hydrarg ammon. dil. B.P C* (1934)
2–5% in a paraffin base.

38. *Ung pic. carbon co B.P C.* (1934)
Ammoniated mercury coal-tar solution and acid salicyl in soft paraffin. Used for psoriasis.

*39 *Ung sulphur B.P*
10% sulphur

*40. *Ung zinc undecen. B.P*
Undecenoate in emulsifying ointment. For ringworm.

41 *Coconut oil ointment S.T.H*
Oil of cade 6%, sulphur 2% and salicylic acid 3% in emulsifying ointment and coconut oil. For scaly scalp conditions.

VI. Pastes

Pastes are a combination of powders with liquids (drying paste), greases (greasy pastes) or both (cooling pastes)

Some have already been considered among creams and ointments. The term paste is a relative one, depending on the amount of powder incorporated.

Pastes should be smeared on thickly and either covered (greasy) or left to dry or evaporate (cooling and drying) Dispense 2–4 oz.

Cooling pastes are becoming more widely used and are likely to supplant some ointments, wet dressings and creams.

(A) Cooling Pastes

42. *Zinc-oil paste* (cooling) (Polano)
Zinc oxide, lime water arachis oil equal parts. With 3 drops each of oleic acid and liq potassae (30%). A more cooling variation has lime water 3 zinc oxide 2 and arachis oil 1 part.

Note Cremor zinc. oxid. can also be classed as a cooling paste.

(B) Drying Pastes

Here glycerine is used, not oil and lime water They dry on the skin and are useful for exuding surfaces (such as nummular eczema).

43. *Zinc oxide drying paste* (Polano)

Bentonite	4
Zinc oxide Talc	equal parts to 50
Glycerine Water	*equal parts to 100*

44. *Crem. aquos.* (S.T.H 1953)

Zinc oxide	25
Kaolin	30
Glycerine	30
Lime water	15

A modification. Dries hard on skin and crumbles away without cleaning. More drying than 43.

(C) Greasy Pastes

Protective and drying. Smear on thickly and cover Dispense 2–4 oz.

*45. *Past zinc. oxid. co. B.P*
Zinc. paste. In white soft paraffin.
(*a*) With 1% crystal violet.
(*b*) With 2% ichthyol.

*46. *Past zinc oxid et acid. salicyl B.P*
(Lassar's paste.) Contains 2% salicylic acid.

*47 *Past acid. salicyl c dithranol (B.N.F and St J)*
½% dithranol in Lassar's paste.

*48. *Past pic. carbon. B.P C* and *B.N.F*
Approx. 3½% coal tar in zinc paste. For chronic eczema and lichen simplex.

*49 *Past zinc. oxid. et pic. carbon. B.N.F*
(White's tar paste.) Approx. 6% tar in zinc paste. Stronger

*50. *Past resorcin. et sulphur B.P.C.* and *B.N.F*
Approx. 6% each of resorcin and sulphur in emulsifying ointment and zinc. For acne and seborrhoeic dermatitis.

6. STOCK PREPARATIONS

The thirty preparations marked with an asterisk provide a complete range of therapeutic agents for the majority of the common skin conditions seen in practice. By judicious mixing, the range can be doubled. For instance

(*a*) No. 37, ung. hydrarg. ammon. dil.—1 part
No 26, crem. zinc. —2 parts
Mix. This gives a mildly antiseptic emulsified ointment useful in infective and intertriginous conditions.

(*b*) No. 49 past. zinc. oxid. et pic. carbon.—1 part
No 45, past. zinc. oxid. co —1-2 parts
Mix. This, with No 48 alone, gives a range of strengths of crude tar from 2–6% that can be used on any phase of subacute or chronic eczema.

(*c*) No. 21 Liq. tinctor —1 part
No. 16 Lot. calamin.—2-3 parts
Mix. This gives a weak but effective half-drying antiseptic lotion. And so on.

It is useful for the dispensing doctor to keep in stock, in addition, some full strength or concentrated ingredients that can be added to the prescription as required For example

Crude coal tar (obtainable from gasworks)
Ichthyol
Sulphur (precip.)
Liq pic. carbon. (or liq carbon. detergens (Wright))
Phenol
Zinc oxide
Calamine, prepared
Crystal violet ½% or brilliant green 5% solution
Argyrol 5–10%
Arachis oil
Propylene glycol
Emulsifying ointment
Lime water

7 STANDARD PRESCRIPTIONS FOR COMMON CONDITIONS

Sunburn, acute erythemas, urticaria	12, 13, 16, 19 24.
Acute eczema, contact dermatitis, drug rashes.	Antihistamines by mouth. Hydrocortisone.
Infections, infected eczema, intertrigo, folliculitis, etc.	24, 25, 26, 28, 42. 16(*b*) 20, 21 22, 26 (*c*), 45 (*a*). Antibiotics.
Subacute and chronic eczematous states.	36, 43, 44, 45 (*b*), 48, 49 Occlusive bandages.
Acne, dry seborrhoeic dermatitis	17 21, 25, 30 36, 39 50.

Notes on Mixing

1 Study the base of the preparation to be mixed and the state of the patient's eruption. Do not use paraffin bases in acute eruptions.

2. Do not mix incompatibles (e.g. mercury and sulphur).

3. *Do not complicate unnecessarily* Decide what you want to achieve and use the simplest agents to this end.

4 In mixing emulsions follow the instructions carefully There is often a critical phase of emulsification outside which the components may separate.

8. SHAMPOOS AND HAND CREAMS

Three standard types of shampoo are given below Many different types are marketed commercially and these have a number of cosmetic advantages, i.e. Genisol (Genatosan) which contains liquor picis carb and hexachlorophene. Other such preparations are widely used. The requirements of a shampoo to be used when there is disease of the scalp are

(1) that it lathers easily in warm water

(2) that it does not contain any substance particularly liable to sensitize or irritate an inflamed skin

(3) that it does not leave the hair or skin excessively dry and degreased (This is an objection to the use of some quaternary ammonium detergent preparations.)

51 *Spir sap kalini*
Potash soap with spirit and lavender oil.

52. *Spir sap* *B.P C.* and *B.N.F*
65% soft soap in industrial spirit. Tar extract can be added. Not altogether suitable for inflamed scalps.

53. *Sodium lauryl sulphate*
Alone as a powder or mixed with emulsifying wax B.P., lanolin and water (This makes a cream shampoo)
Triethanolamine lauryl sulphate is also used.

Hand Lotions

Every hospital has its favourite hand cream. A number of excellent commercial and cosmetic creams are available. The following are examples of some standard types

54. *Lotio. emolliens* (B.P C. 1934 Martindale)

Tragacanth	gr	24
Sp chloroform	min.	90
Tinc. tolu	min.	90
Eau de Cologne	dr	2
Glycerin	min.	90
Water to	oz.	10

55. *Lanolin cream*
Lanolin 6 parts, sweet oil of almonds and lime water 4 parts of each. This is an oily skin cream for dry or chapped hands.

56. *Glycerin cream*

Boric acid	dr	1
Glycerin	dr	6
Lanolin	dr	6
Soft paraffin	oz.	1

Another type of greasy skin cream.

Silicone Barrier Cream

Several varieties of these are on the market. Their value has not been fully determined, but they may be of some value in preventing the effect of soaps and other alkalis for short periods. All barrier creams are effective in proportion to the care and sense with which they are used. They are not meant to be used when the skin has already been damaged.

9 HYDROCORTISONE PREPARATIONS

Hydrocortisone is marketed by several firms. The active ingredient is the same in all the bases vary

Ointment (1% and 2 5%)

The weaker strength is adequate for most conditions. Two types of base exist the greasy and the non-greasy The latter is more suitable for acute eczematous conditions, and the former for areas of lichenification or simple pruritus.

Lotion (0 5% and 1 0%)

In squeeze bottles of 20 cc. Rather more economical than the ointments. Spreads easily Weaker strength adequate for most conditions.

With antibiotics

(a) *Ointments*

With neomycin, bacitracin, terramycin, etc. Other combinations are likely to appear

(b) *Lotions*

Lotions incorporating tyrothricin and soframycin have now become available.

Hydrocortisone preparations should always be used sparingly and are most effective on small, localized areas with considerable itching, or in cases of acute contact dermatitis. They should *not* be applied indiscriminately to wide areas or before a complete diagnosis has been made. They suppress—or partially suppress—the reaction of the tissues, and are not, in themselves, curative.

10 ANTIBIOTICS

Wisdom and caution suggest that minor infective conditions of the skin should preferably be treated with antibiotics which do not cause sensitization reaction and which are not likely to be needed parenterally should bacterial resistance develop. Penicillin and chloramphenicol are ruled out because of their sensitization risks and penicillin also because of the high incidence of resistant organisms on the skin.

These organisms are now showing signs of developing resistance to aureomycin, which may in the future, cease to be the useful drug it is now There is no place for the indiscriminate application of parenterally-used antibiotics on the skin. Neomycin, Graneoidin, tyrothricin and soframycin are just as effective, and are free from the risk of inducing resistance to drugs that may be needed for most serious conditions.

Neomycin. Available as $\frac{1}{2}$–$1\frac{1}{2}$% ointment. The pure powder is expensive and this restricts the use of a lotion which would other wise be an ideal preparation.

Bacitracin. Available with neomycin as Graneoidin ointment. An effective agent.

Tyrothricin. One of the older antibiotics neglected because it cannot be given parenterally Cheap and effective in 1/100 to 1/1,000 concentration.

Soframycin. A new antibiotic with a reportedly wide range of activity

Antibiotics should be used as lotion (in water spirit or propylene glycol) wherever possible. Half to one per cent is usually a sufficient strength. Do not use for longer than ten days apply two or three times a day

11. ANTIHISTAMINES

There are a very large number of different antihistamines on the market. They are much abused in practice and given in many conditions where they can have no specific effect. They have varying side-effects which are sometimes valuable in themselves (i.e. drowsiness or relaxation). Because of their name, reputation and colour they may also exert a powerful placebo effect. When used as hypnotics, they are not habit forming and are safer than barbiturates.

The effective dose varies enormously Provided that the condition is one in which there is free circulating histamine, *the effective dose is that which is enough to control symptoms* but it is useless to increase the dose progressively in a condition such as eczema, where there is no circulating histamine.

The length of action of individual members of this group should be studied.

Examples

Promezathine (Phenergan), 25 mg. and 10 mg. Slow-acting. Peak in 3–4 hours, excreted over 8 hours. Few side-effects.

Histantin. Fairly quick-acting. Few side-effects.

Mepyramine (Anthisan). 100 mg. Peak in $\frac{1}{2}$–$1\frac{1}{2}$ hours, variable but usually marked side-effects.

Diphenhydramin (Benadryl). 25–50 mg. Short-acting. Hypnotic side-effects.

Piriton. 4 mg. About the same peak as mepyramine, but possibly with fewer side-effects.

TABLE OF HYPNOTICS

Group	*Name*	*Trade Names*	*Dose*	*Duration and Action*	*Remarks*
I. Barbiturates					
(I) *Long-acting*	Barbitone Sodium	Medinal	5–10 gr	Action within 1 hour. Duration 8–16 hours.	Can be used with analgesics for relief of pain. Cumulative. Most effective administered as a powder with hot drink. Disadvantage slow action and after-effects.
	Phenobarbitone	Gardenal Luminal	½–2 gr (30–120 mg.) maximum 6 gr. Elixir Phenobarbitone 60–120 m.	Action 1–1½ hours. Duration 6–10 hours.	Long-acting sedative. Without side-effects in small doses.
	Phenobarbitone Sodium	Sodium Gardenal Sodium Luminal	½–2 gr 2–3 gr. I.M. (Inj.)	More rapid action than above. Soluble.	Very effective long-acting and rapid-action sedative in restless patients.
(II) *Intermediate*	Amylobarbitonum	Amytal Dormital	½–3 gr t.d.s.	Within 30 minutes. Duration 5–6 hours.	To control insomnia, given 30 minutes before retiring. As a sedative ½ gr t.d.s.
	Amylobarbitonum Sodium	Sodium Amytal	1½–5 gr	Within 15–30 minutes.	Useful for continuous sedation.
	Quinalbarbitone Sodium	Sodium Seconal	1½–3 gr	Action 15–20 minutes. Duration 4–7 hours.	Insomnia and anxiety states. Safe hypnotic with relatively few side-effects.
	Sodium Seconal Sodium Amytal	Tuinal	1½–3 gr	Rapid onset 15–20 minutes. Duration 8–11 hours.	Sometimes morning somnolence.
(III) *Short acting*	Butobarbitonum	Soneryl	1½–3 gr. Maximum in 24 hours: 6 grs.	Action 15–30 minutes. Duration 4–5 hours.	Quick-acting barbiturate.

	Cyclobarbitone	Phanodorm	3–6 gr	Within 15 minutes. Duration –3 hours.	More rapidly [illegible] barbitone. Anxiety states and insomnia.
	Pentobarbitone Sodium	Nembutal	1½–3 gr; maximum 6 gr	Within 15 minutes. *Duration* 2–3 hours.	Rapid effect and shorter duration of action, therefore use where initial difficulty in getting to sleep.
			Suppositories, 1½ gr.		Suppositories used in acute anxiety states.
II. Carbromyl Urea	Carbromalum	Adalin	5–15 gr	Action within 30 minutes. Duration 6 hours.	No after-effects. Useful in insomnia due to worry
	Carbromal Bromvaletone	Persomnia	195 mg. and 65 mg.	Action within 30 minutes. Duration 6 hours.	*No after-effects.* Useful in insomnia due to worry
	Pentobarbitone Carbromal	Carbrital	3–6 gr	Within 30 minutes. Duration 6–8 hours.	General sedative and hypnotic.
III. Others	Chloral	Syrup of Chloral	5–30 gr Children 1–2 gr. up to 1 year then 2–7 gr	Action within 30 minutes. Duration several hours.	Not in patient with hepatic or renal impairment. Rapid absorption. 'Nervous insomnia'
	Mist. Chloral		20 gr. in ½ fl. oz.	Action within 30 minutes. Duration 8–12 hours.	Must be freshly prepared.
	Mist. Pot. Brom et Chloral	"2 fifteens"	½–1 fl. oz.	Action within 30 minutes. Duration 8–12 hours.	Unpleasant taste gastric irritant. Morning drowsiness. But useful and safe.
	Paraldehyde		*5–10 mls. I.M. (inj.)*	*Very rapid* action. Duration 6–8 hours.	For immediate effect.
	Haustus paraldehyde		1½ fl. oz. by mouth	Action within 15 minutes. Duration 6–8 hours.	Very effective but unpleasant taste and odour.

APPENDIX II

DERMATOLOGICAL EMERGENCIES

The situations that may reasonably be regarded as dermatological emergencies are

Angioneurotic oedema involving the throat and mouth.
Multiple wasp and bee stings.
Acute anaphylaxis after injections of A.T.S. or penicillin in skin patients under treatment.
Hyperthermia of infants with infantile eczema.
Anthrax
Smallpox.
Severe *Erythema multiforme* ('Stevens-Johnson') type.
Malignant melanoma.

Thromboses, complications of corticosteroid therapy and acute general conditions manifesting themselves on the skin are not included.

Angioneurotic Oedema

A sudden onset of swelling of one part of the body Danger of laryngeal obstruction, oedema of the glottis.

PREVENTION

A patient known to be subject to attacks of angioneurotic oedema should always keep adrenaline at hand. The Ampin method of administration is very convenient. This adrenaline is supplied in a tube with a sterile needle. The cover is removed and the neck of the tube broken with the needle in position in the skin. The patient should be shown how to do this for himself.

TREATMENT

Adrenaline 10m. immediately Repeat in ½–¼ hour if necessary This is usually sufficient it is the speed of treatment that matters most. One, or more, of the following measures may be needed in individual cases

Intravenous antihistamines.

A.C.T.H., 5 units intravenously in sterile normal saline, *given slowly* or 25–40 units intramuscularly

After the acute attack is controlled, give ephedrine ½ gr b.d., high doses of antihistamine and barbiturates to allay apprehension.

If the patient is *in extremis* a tracheotomy may have to be performed on the spot.

Multiple Wasp and Bee Stings

May take the form of massive urticaria, angioneurotic oedema or anaphylactoid reactions. Treatment as for angioneurotic oedema.

Beekeepers generally become immune, but may suddenly develop anaphylaxis, and collapse and die within a few minutes.

For less severe cases, antihistamines, warmth, and sedation may be sufficient.

Acute Anaphylaxis

Collapse and death may take place with alarming rapidity some minutes after injection.

PREVENTION

Give test-dose of serum and wait 10 minutes. Ask about previous sensitivities, and watch patients who have shown these, for half an hour after the injection.

Inject Piriton or other antihistamines together with the serum in susceptible persons or when there have been any reactions in the past.

TREATMENT

Adrenaline.
Warmth.
Artificial respiration.

Hyperthermia

Hyperthermia of infants with atopic eczema (very rare). Cases usually occur within the first few days of admission to hospital. Temperature rises suddenly and sharply. There may be no premonitory symptoms. Death occurs rapidly after collapse.

TREATMENT

Cortisone or A.C.T.H. immediately in adequate doses. Acute tracheo-bronchitis of infants may present in the same way. Antibiotics should be given at the same time if any doubt exists.

Anthrax

Malignant pustule was formerly a disease with a high mortality. Cases still occur but the prompt use of penicillin or aureomycin is curative.

Smallpox

Cases of smallpox sometimes present unexpectedly as undiagnosed pustular eruptions. Isolation and notification must be prompt.

Severe Erythema Multiforme

Lips, eyes, mouth and genitalia intensely affected. Antibiotics and steroid therapy do not displace the need for skilled nursing. The disease may progress rapidly in the first few days.

Malignant Melanoma

When diagnosed or even suspected clinically arrangements must be made for immediate treatment. If the lesion has been excised widely for histological confirmation, arrangements must still be made for the patient to be seen by a surgeon within a week—*preferably in a hospital bed—when the report will be available.* Tragedies occur by neglecting this precaution. It cannot be left to the patient or to the hospital clerks, where human error may cause unintentional delays and considerably worsen the patient's prognosis. If the histological report confirms that the lesion is benign, nothing has been lost if not, all chance of delay has been prevented.

APPENDIX III

BANDAGES SPECIAL DRESSINGS AND EQUIPMENT

Occlusive Bandages

Viscopaste—zinc oxide paste.
Ichthopaste—zinc and ichthyol paste.
Coltapaste—crude coal-tar paste.

These are made by Messrs. Smith and Nephew Similar types, Dalzoband are made by Dalmas, Ltd. They are supplied in plastic covers which resist their tendency to dry out. In cold weather they should be warmed before application.

Such bandages are very valuable in the control of sub-acute and chronic lichenified eczematous conditions of the limbs, dermatitis artefacta, hypertrophic lichen planus and hypostatic eczema with varicose veins—in fact, in all conditions where the application of a paste needs to be combined with support or occlusion. Coal tar paste bandages are particularly useful in flexural prurigo (atopic dermatitis). They may be covered with Tubegauz or other bandaging, and left in position for up to two weeks at a time.

Tubular Gauze Bandaging

This is described in a separate chapter It is obtained in various widths suitable for all parts of the body A set of applicators for winding these on with pressure can be obtained on request from Messrs. Scholl Ltd., a convenient box for use as a wall cabinet being also available. Chemists will obtain bandages on request, and sell it by the yard. The rolls are 25 yards in length. A thicker (Industrial) type of tubular bandaging is also available, but is not as satisfactory for acute conditions.

Elastic Webbing Bandage

This is made in two qualities—the blue-line bandage and the more expensive but longer-lasting nylon weave (red-line").

Obtainable from Marlow and Son, Pelham Street Mills, Derby in rolls, of which 3½ yards are needed for bandaging a leg properly Lengths also with a foot-loop and tapes already sewn on are convenient but a little more expensive.

Adhesive Bandages

There are many kinds of adhesive bandages on the market, and their very number testifies to the difficulty of obtaining an ideal one. Some patients show sensitivity to adhesive material, and although many attempts have been made to reduce this risk, it still remains. Manufacturers of the newer strip or porous types have attempted to overcome this, with varying success. It is natural that the particular type and make used depends on individual preference and experience, but Lestroflex has seemed to the author to be particularly valuable, and Elastoplast and Poroplast are also extensively and successfully used.

Carbon Dioxide Snow

The small portable set mentioned earlier in this book, together with packets of six cylinders of carbon dioxide gas, can be obtained from Messrs. Sparklets, Ltd., Tottenham, London. Used cylinders are replaced by full ones as required.

Electro-Coagulation Diathermy Apparatus

This convenient, portable set is manufactured by the Electro-Medical Supply Co Ltd. in two versions the Megafrex (of lower power) and the Endofrex The former includes a fine, platinum needle and automatic on-off switch for epilation and adequately covers the ranges of superficial diathermy destruction needed by the dermatologist. Endofrex the more powerful unit, gives a light coagulation current and a normal coagulation current. These have a powerful destructive effect, sufficient for any surgical diathermy measure needed on the skin. Both these machines are monopolar—that is, no indifferent electrode need be applied to the patient. Anaesthesia is seldom required and treatment can thus be carried out with great ease and speed.

Comedo Expressor

Satisfactory designs are made by John Bell and Croydon, the Holborn Instrument Company Allen and Hanburys and others.

Curettes

A wide variety of curettes are available, which, first and foremost, must be sharp. They should have a square and easily gripped

handle and a round or oval sharp-edged spoon, preferably of two sizes—one at each end. (Plate XXXIII.)

Improvisation for Domestic Use

A nurse may have to deal with an acute dermatological problem in a patient's home, and may find herself without drugs, dressings or appliances with which to carry out the emergency measures.

Here are some ways of improvising these.

Dressings. The inside of a washed, ironed and folded handkerchief is sterile and can be used as a dressing for wounds or sores. Torn pillow-cases, sheets, shirts and handkerchiefs make excellent dressings for the application of ointments. Failing anything else, paper bags or toilet paper may be used as cover for ointments.

Wet Dressings Potassium permanganate crystals ('Condy's Crystals') are not found in homes as commonly as they were, though boric acid is usually available. This powder should be mixed with hot water stirred and strained before being used as a solution, diluted with three times its volume of water *Do not use this for children.* Common salt, 1 teaspoonful to a pint of water is certainly the easiest wet dressing solution to prepare.

Cradles to keep bed-clothes off the legs may be improvised. The back of a chair may be pushed under the mattress, and the clothes lifted over the top two sides can be knocked out of a wooden box and this used the frame of a large gardening cloche, a fire-guard or a clothes horse are also quite suitable in emergencies In hypostatic conditions the foot of the bed should be raised with bricks, blocks of wood or heavy books. In this case the castors will have to be removed.

APPENDIX IV

INSTRUCTION SHEETS FOR PATIENTS

These brief Instruction Sheets deal with the details of treatment that are to be carried out by the patient himself. District nurses, and others who have to supervise treatment in the patient's own home, may find them of value.

WET DRESSINGS

You may be given a solution to use for these dressings. If so, dilute it according to the instructions stated. If you are given crystals of potassium permanganate, use sufficient to make the water rose-pink.

Prepare half a dozen layers of linen, gauze or old rag—but not lint or wool—the right size to cover the affected area. Soak these in the solution, which should be cool or cold. Lay them damp—but not dripping-wet—on the skin. Hold them in position with a twist of bandage or with pins. Cover with a light towel or linen bag, if you wish, but only very loosely. The solution will evaporate and cause the dressing to dry within a few hours. *Do not let this occur* but damp it again by adding another layer soaked in the solution, or by sprinkling some of the solution over the existing layers.

Keep these damp dressings in position for twenty-four or thirty-six hours. They can be changed completely twice a day and the affected part bathed in fresh solution. Wipe away any scabs or crusts that are present underneath.

INSTRUCTIONS TO PATIENTS WITH PATCH-TESTS

(1) If you are sensitive to any of the agents used in the patch-testing, you may develop irritation at one or more of the places tested.

(2) If this is not severe enough to interfere with your comfort, leave the patch undisturbed until you report back in forty-eight hours.

(3) If the irritation is excessive and arises quickly you may take the offending patch off—*but only the offending one*—preserving it carefully and bringing it with you when you come. Do not disturb the other patches.

(4) In the very rare case of an extreme sensitivity to the adhesive plaster itself, you may take all the patches off if the irritation is excessive. The test will then be repeated with other forms of plaster

(5) Very occasionally a late reaction develops after the patch is removed in forty-eight hours. If you are not being seen again soon, you should report this reaction, since it may be of great significance. In the case of some clothing sensitivities, such a reaction *may not form for several days after the patch is taken off*

(6) Calamine lotion, a wet dressing, zinc cream, or any other bland substance may be used for reactions at the patch site. This will in any case subside quickly

(7) If a marked reaction occurs, you may notice some intensification of pre-existing areas of eczema or dermatitis. This dies down in a day or two

TREATMENT OF SCABIES AT HOME

Your condition is contagious only from prolonged body contact, but other members of your family may also be affected. It may take some weeks before signs of the infection become evident, so it is a wise precaution for all the members of your family to have the treatment together *whether they appear to be affected or not* Any itching spots, scratch marks or sores, particularly about the hands and feet, buttocks and armpits, should be regarded as a sign of infection and you should report them to your doctor

Treatment is nearly always successful if carried out properly You should not repeat the course of treatment for at least ten days, as the itching may take a little while to die down, even though the infection is completely eradicated.

Lie in a hot bath for fifteen minutes and soap yourself well. Use a soft scrubbing brush to open up affected areas, particularly the hands, fingers, wrists, feet, buttocks, arms and shoulders. Do not worry about your head and face, as these are scarcely ever affected.

After drying thoroughly paint on, or have painted on, the emulsion which your doctor has given you. Cover every part of your body from the neck downwards, *including the soles of the feet* Be particularly careful to get the emulsion between the fingers and in

the folds and flexures of the body It may be applied conveniently with a shaving brush or wide paint brush. It is far better to get someone else to do the painting so that no areas are missed.

(*N.B* The emulsion dissolves nail-varnish and the paint of brush-handles.)

Allow the emulsion to dry while standing in a warm room or in front of the fire.

Put on the clothes you were wearing before treatment (i.e. ordinary night-clothes, if treatment is carried out in the evening).

The *following evening* carry out the painting as before, but without having a bath.

The *next evening* take a hot bath, wash away the remains of the emulsion, dry yourself thoroughly and put on clean night-clothes.

There is no need to disinfect your clothes ordinary washing and ironing, with a lapse of a week or two before using them again, will ensure that they are free from infection

Some continued irritation or even a little increase of irritation may occur at the end of treatment. This seldom means that there is any infection left, but that the effects of the scrubbing and painting have slightly irritated the skin. If the irritation persists, your doctor will provide some calamine lotion or zinc cream.

Once you have changed into clean night-clothes at the end of treatment, remember to wear a new set of underclothes next day

If the treatment fails it may be because

one member of your family who was not treated had or was incubating, the disease and has passed it on to you again

you failed to scrub or paint adequately some part of the body such as the soles of the feet

you are one of the very few people whose skins are sensitive to the emulsion and who need different treatment. This is rare.

APPENDIX V

THE DERMATOLOGICAL OUT-PATIENT DEPARTMENT

Skin clinics are run on rather different lines than most other out patient clinics because of certain features peculiar to this branch of medicine. Skin diseases are very common in general practice—about 11 per cent of patients going to the surgery are suffering from a skin complaint. It is not always easy to examine these patients fully in surgeries or to carry out the special types of investigations and treatment often required. Many patients are therefore referred to hospital, where the clinics are usually large and facilities inadequate to deal thoroughly with the number of patients.

The organization of dermatology in this country has fallen behind the very considerable advances made in the last thirty years. There still exists a belief that the diagnosis and treatment of skin disorders is an empirical, even an arbitrary matter there is also a lack of understanding of the very complex problems that may be involved. The ideal skin departments should have adequate facilities for

A full and unhurried examination of patients This often involves, not only an examination of the skin, but a full medical assessment, with the testing of the urine and blood pressure. In others the genetic, allergic and psychological aspects have to be recorded in detail. The proportion of patients who need to be undressed completely varies, but unless facilities exist for at least half the patients doing so, confusion occurs.

Treatment of minor conditions at the same time of examination. Small lesions may need cauterizing or scraping. Diathermy may be used A solitary wart may be removed.

Investigations both of a dermatological and a general medical nature. Skin, scales and hairs are examined for fungus, and Wood's light examinations and patch-testing are carried out. Biopsies are performed frequently

Specialized treatment either daily or weekly External otitis, impetigo and infective conditions in general may need daily dressings. Stitch removal, warts and leg ulcers need weekly treatment clinics. In all large centres, it should be possible to treat psoriatics with the daily bath–light–dithranol routine described elsewhere. Unfortunately such facilities are rare and the patient with a skin disease must accept improvisation as the price of official neglect.

As well as being able to see the whole of a patient s skin, it must be seen adequately and with a good light. The ordinary electric bulb distorts colour values daylight bulbs may be used in Anglepoise lamps. Certain types of overhead fluorescent lighting are excellent, but others give too much glare. The rooms must be warm.

Dermatology differs from most other branches of medicine in the order of examination. A brief history is followed by inspection, after which a more elaborate history is taken. Patients may therefore have to move in two directions from desk to couch, and back from couch to desk.

The clinics should be equipped with

- Enough desks, chairs and cubicles to see the patients without delay
- A trolley containing essential applications and instruments.
- A side table with microscope and apparatus for examining skin scales and hairs.
- A cupboard containing the collection of substances used for patch-testing. In an industrial area this may be considerable.
- A treatment room equipped with facilities for minor operations, dressings and regular treatments. A stock of common applications, occlusive bandages and Tubegauz should be kept.

PREPARATION OF THE TROLLEY

Apart from swabs, cotton wool, gauze, scissors and forceps, the *following equipment is usually required*

- Small nail scissors.
- 2 Whitfield's hair forceps (or some similar make).
- Scalpel for scraping scales.
- Blackhead expressor
- One or two small curettes.
- Quantity of orange-sticks, some flattened, some pointed.
- Tongue depressors.
- Blue-line or other elastic webbing bandage in rolls or in lengths.
- A quantity of rag or linen, for dressings.

A quantity of Tubegauz or some similar stockinet dressings of various widths.
Patch-testing squares.
Spirit.
Acetone.
Ether
Trichloracetic acid (this must be kept in a glass-stoppered bottle and supersaturated, as it absorbs water and becomes too dilute for caustic use after a time).
Xylol.
Pure phenol.
Gentian violet 1 % in 70% spirit.
Liquid acid nitrate of mercury
Liquor potass. (5% or 10%) for preparing slides.
Collodion.
Whitehead's varnish or Nobecutane.
A quantity of slides and cover slips.
Watch glass.
Carbon dioxide snow apparatus and cylinders.
Various sizes of *wooden* applicators.

A Stock Supply for the Dressing Clinic

Small quantity of potassium permanganate crystals.
Boric and starch powder for poultices.
Zinc cream.
*Zinc cream with gentian violet 1 % (or brilliant green).
Zinc paste.
*Zinc paste with gentian violet 1%
Zinc paste with 2% ichthyol.
Lot. calaminae oleosa.
Lot. calaminae.
*Neomycin or Graneoidin ointment.
Normal saline.
A bland dusting powder
*Gentian violet 1% in 70% spirit.
Pig. Carbol-fuchsin ("Castellani").
Ol. arachis.
Emulsifying ointment.
Hydrocortisone ointment (1%) or lotion (0.5%).
Various types of occlusive paste bandages.

*These items are likely to vary according to the individual preference of the consultant.

Bibliography

A full list of references would serve little purpose. The following have been chosen as likely to be of specific value to the nurse or general practitioner who wishes to pursue any special aspect of nursing and management techniques. It is not meant to be comprehensive.

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INDEX